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CANNER PACKER

AUGUST 1959

CANNED • DRY • FROZEN • GLASS

For new frozen and canned product ideas, —General Foods takes an egg 25

Washington canner handles empty cans in pallet packs, semi-automatically 40

Maryland packer uses laboratory techniques for raw product control (Cover) . . 28

Up to 7% MORE CORN off the Cob!

—with FMC "Automatic Size Detection" Corn Cutters

Production comparisons over the past two seasons, covering thousands of hours on hundreds of FMC Model 3-A Corn Cutters, have produced these vital customer estimates*:

Up to 7% more yield per ear!
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Up to 50% more cutting between honings!
Up to 21% fewer parts, lower maintenance!

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*Depending on make and model of corn cutters replaced.

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PARIS 16e (FRANCE)

Please write directly, to :

Maison Frédéric FOUCHÉ
Food Machinery Department
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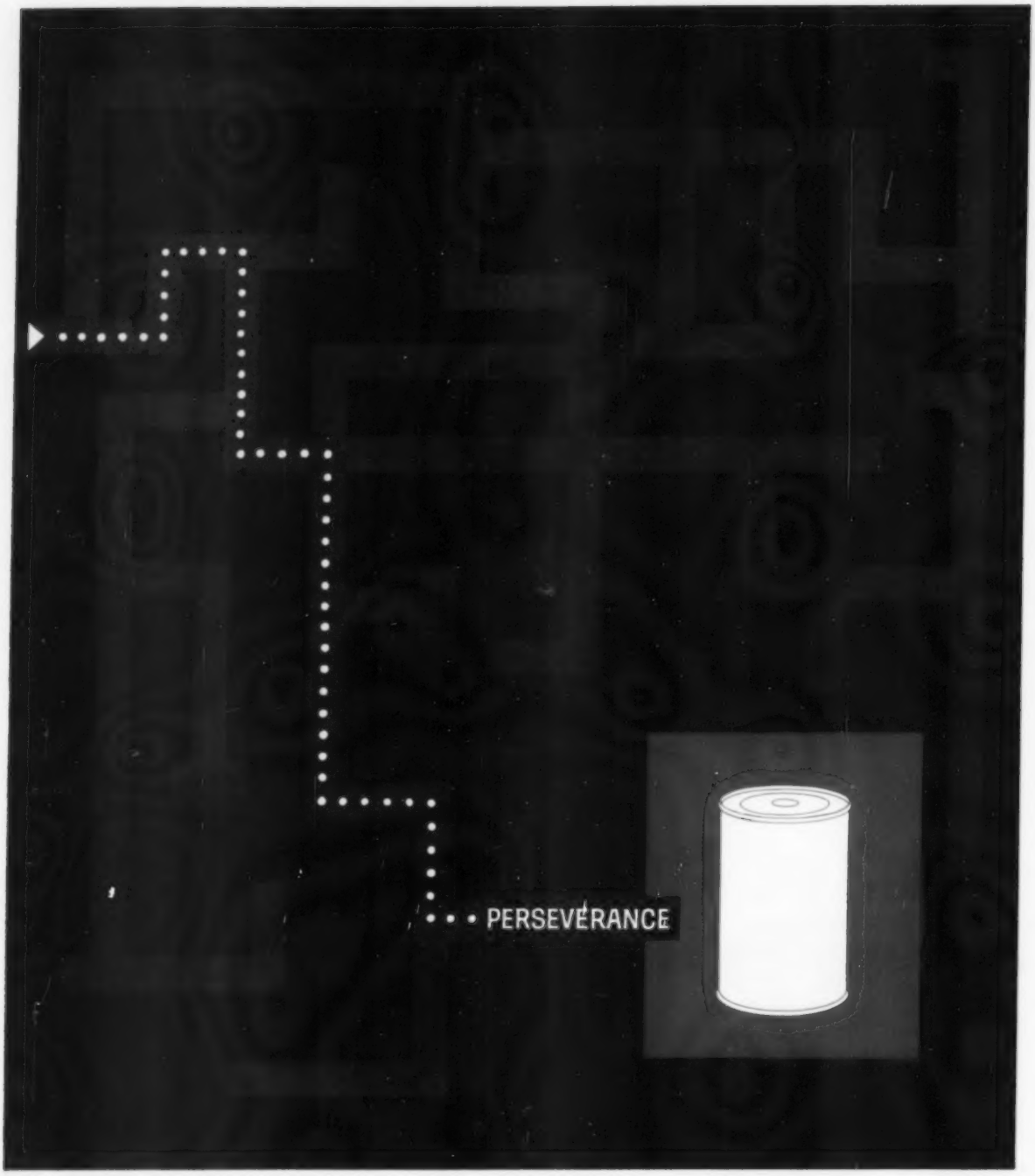

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CANCO Division AMERICAN CAN COMPANY

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CANNER PACKER

volume 128, number 8 **AUGUST 1959**

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COVER PICTURE: Our cover girl this month is not polishing off a new atom bomb. Instead, she is working in the soil testing laboratory of John H. Dulany & Son, canner and freezer of Maryland. Not a seed is planted by this experienced firm until the land has been tested for both major and minor chemical elements. Soils well fertilized against "hidden hunger" produce top quality crops. For other Dulany practices, please turn to page 28.

FEATURES:

Frozen Eggnog Cubes: One of Many Possib'e New Egg Products 25
General Mills expert develops ideas for eight new canned and frozen products from eggs.

How Dry Beans Are Cleaned and Packed 26
The new plant of the Washington Farmers Cooperative Assn. has modern cleaning, polishing methods.

Quality Control Must Be Practiced in the Field 28
John H. Dulany and Son, Fruitland, Md., has a quality control program that begins even before the field is seeded.

Mechanization Helps Shrimp Freezing Grow 30
Daniel and Dumas Seafoods, Inc., Port Lavaca, Texas, has a production line that handles 3 to 4 million pounds of shrimp per year.

How to Predict Tomato Maturity 32
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PEACHES for Canning and Freezing 33
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Pallet System for Handling Cans Cuts Labor 60% 40
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In the Next Issue: *Ultrasonics can be used in processing food products, for emulsifying, cleaning—even sterilizing. . . How to produce fruit concentrates and syrups. . . A better jelly for bakers.*

DISTINCTION

In Furniture...

CHIPPENDALE

Chippendale furniture is distinctive for its exquisite proportions. Thomas Chippendale —designer, carver, cabinet maker—had the genius to transmute into consistent unity such heterogeneous elements as lattice backs, pagoda motifs, and the cabriole leg.

In Seasonings...

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You'll detect an exceptional flavor quality in PEPPEROYAL. And find it duplicated, batch after batch. All of the pepper extractive is contained in the base material, without loss of essential flavor elements. The laboratory controls that insure PEPPEROYAL quality also assure the better taste of all Griffith soluble spices and seasonings. Use PEPPEROYAL in catsup, and all other food products for a distinctive flavor.

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CANNER PACKER BUSINESS NEWS LETTER

totally dedicated to serving canned, dry, frozen, glassed food processors

August 1959

Continuous government inspection of fruit and vegetable products has been in effect for 20 years in 1959. Two decades ago, in Traverse City, Mich., the first trial was made of this voluntary in-plant inspection service by U.S. Dept. of Agriculture. Whether you do or don't like the service, it has become an important factor in canning, freezing, etc. Currently, 182 plants employ the government inspectors, and in 1958 they watched the packing of over 100 million cases of canned foods, one billion lbs. of frozen items and 60 million lbs. of dried fruits and vegetables.

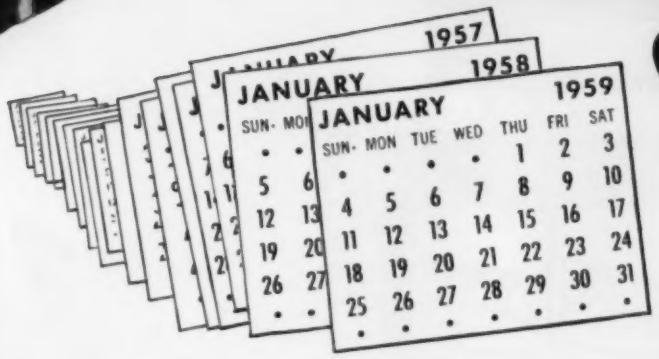
Pipelines may carry foods from one section of the U.S. to another. Speaking before Am. Soc. of Civil Engineers recently, Julian Nardi of Ford, Bacon & Davis reported that liquids of any type can be moved by such lines if the volume is large enough to satisfy the economics. In addition, solids travel through pipelines readily, if they can be suspended in a liquid which later is used with the product, or which can be separated from it by screening, distilling, etc. Shipping foods by pipeline would be a logical successor to tank-truck movement, now an important food transportation method.

Export packaging now needs the same point-of-purchase merchandising appeal that U.S. Domestic packs have to have. Self-service stores are becoming common in many sections of the world. For example, Calif. Grocers Advocate reports that by the end of 1959, Japan will have over 200 self-service supermarkets in operation, and that the 100 already open are showing amazing profits.

More fish and shellfish for world tables is expected to be the result of tests being made in improving the ocean as a place for sea creatures to live. Scientists are making artificial reefs in areas now barren of life, and fish are reported being attracted to these man-made shelters. Also, kelp is being transplanted, and fish are seeking out the new food sources these beds provide. Finally, predatory sea creatures - like sea urchins and starfish - are being watched to see if they can be controlled, to the ultimate benefit of food fish.

Rated refrigerated trailers will soon be available for transporting frozen foods, according to an announcement by Truck Trailer Manufacturers Assn. The trailers are to be tested to see that they measure up to heat-transfer requirements set up by National Bureau of Standards. Those with good performance ratings will be safer for the movement of frozen foods and other perishables than types which readily take on heat.

Plans for new food plants are announced daily. Libby, McNeil & Libby's Yakima, Wash. plant is currently building a new warehouse which will be ready by this season. It will be a 40,000 sq. ft. tilt-up concrete structure which will roughly double Libby's storage space. This summer the construction of a new laboratory at American Maize Products Co. will result in the expansion of both quality control and research activities. American Maize is building the two-story lab to house its quality control department. Upon completion, the present quality control laboratories will be added to the company's research facilities. The British H. J. Heinz Co. officially opened its new $18.2 million plant at Wigan, Lancashire.



EXPERIENCE

ANCHOR HOCKING PUTS YEARS OF GLASS PACKAGING EXPERIENCE TO WORK FOR YOU

Your source of supply for glass containers and closures is important. Select it as carefully and critically as you would a surgeon, attorney or other specialist. Analyze and compare the uniform quality of its products. Check its reputation, qualifications and experience. Check its facilities for efficient production. Check its servicing of accounts, both small and large. Check it as a dependable source of supply. Check it for leadership in research and engineering—its ability to bring you tomorrow's thinking today. Check all these things and you'll find Anchor Hocking to be an experienced leader in the glass container and closure industry. So contact an Anchor man now! Anchor Hocking Glass Corporation, Lancaster, Ohio.

ANCHOR HOCKING

Put an Anchor Man on your team

PREVENT DAMAGE WITH ADDED FRICTION

The above photos show what happens when RESYN® 32-4150, National's invisible non-skid coating, is sprayed on slick surfaced cases and bags.

At top: Gloss-inked cases of beer slip when a pulling force of 7 lbs. is applied.

Below: A light coating of RESYN 32-4150 on tops only has increased friction to the point where a force of 11 lbs. is required to make cases slip.

The result: A 57% increase in resistance to slip that safeguards workers, prevents damage.

RESYN 32-4150 can be spray coated on cases and bags during manufacture or after filling and packing. It is inexpensive. Instant drying. Colorless. Odorless. In no way dulls glossy sales messages. Write for complete information.

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METRO GLASS

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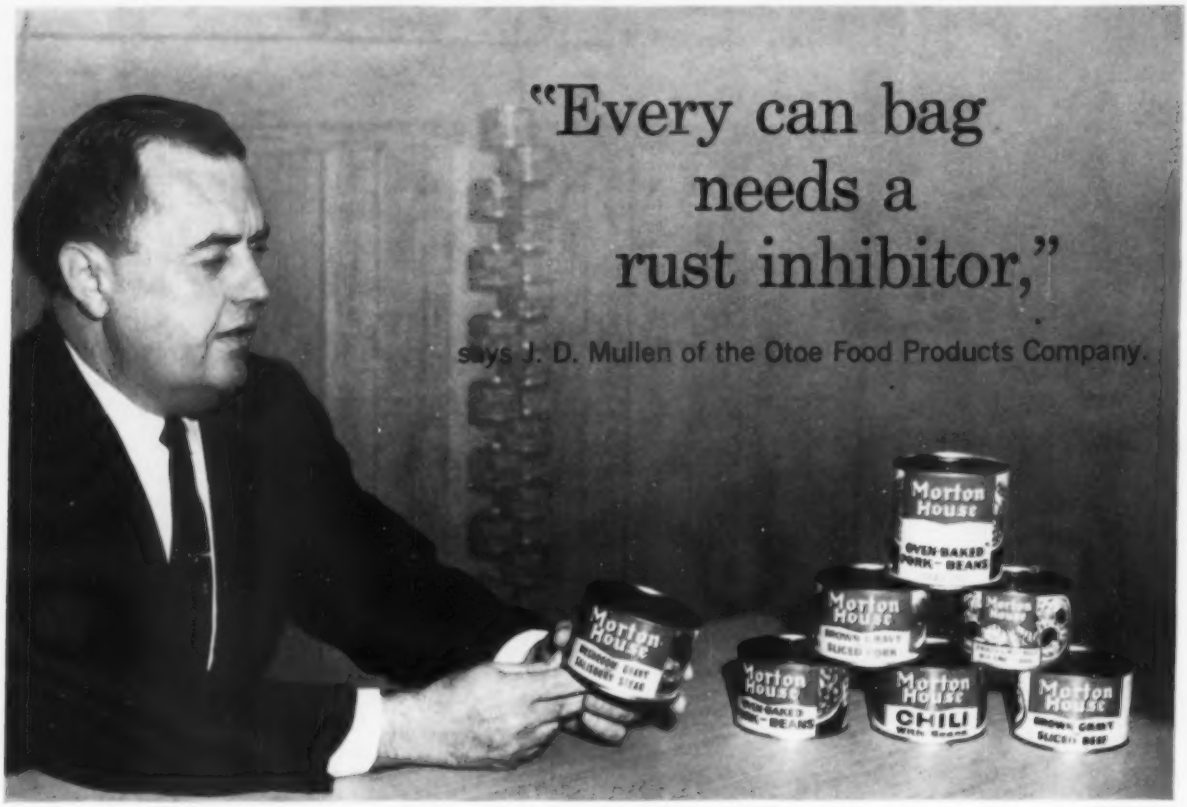
"Every can bag needs a rust inhibitor,"
says J. D. Mullen of the Otoe Food Products Company.
Morton House
OVEN-BAKED PORK-BEANS
Morton House
CHILI

As Vice President in charge of Operations, Mr. Mullen, like everyone in the company, is vitally concerned with the quality reputation of their "Morton House" brand foods.

"In our business we've got to stop rust before it starts. We've learned that quality is the result of meticulous attention to every step in our operation," says Mr. Mullen.

"Our quality control procedure recognizes that corrosion may begin in stored cans waiting to be used, even when that fact may not be visually evident."

By using Cromwell Can Bags treated with Ferro-Pak Inhibitor* the cans are fully protected, dealer returns are practically eliminated—because rust never gets a chance to start. Manufacturers and users of cans will find the Cromwell Complete Packaging Service a thoroughly tested and proven method for the protection of their products.

To stop rust before it starts, *we recommend . . .*

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and **taste** so good . . .

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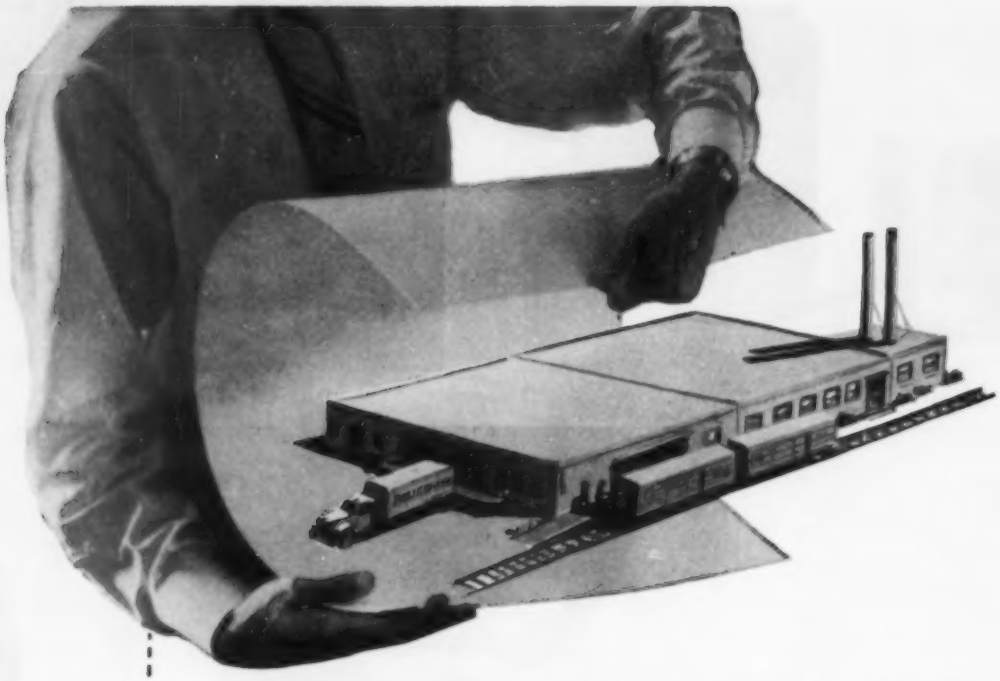

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New Wil-Gard clear Polyethylene, five-fingered Disposable Gloves offer the most convenient hand protection ever developed. Lightweight, flexible and moisture-proof, they protect hands from scores of chemicals, powders and resins . . . safeguard precision parts against perspiration corrosion.

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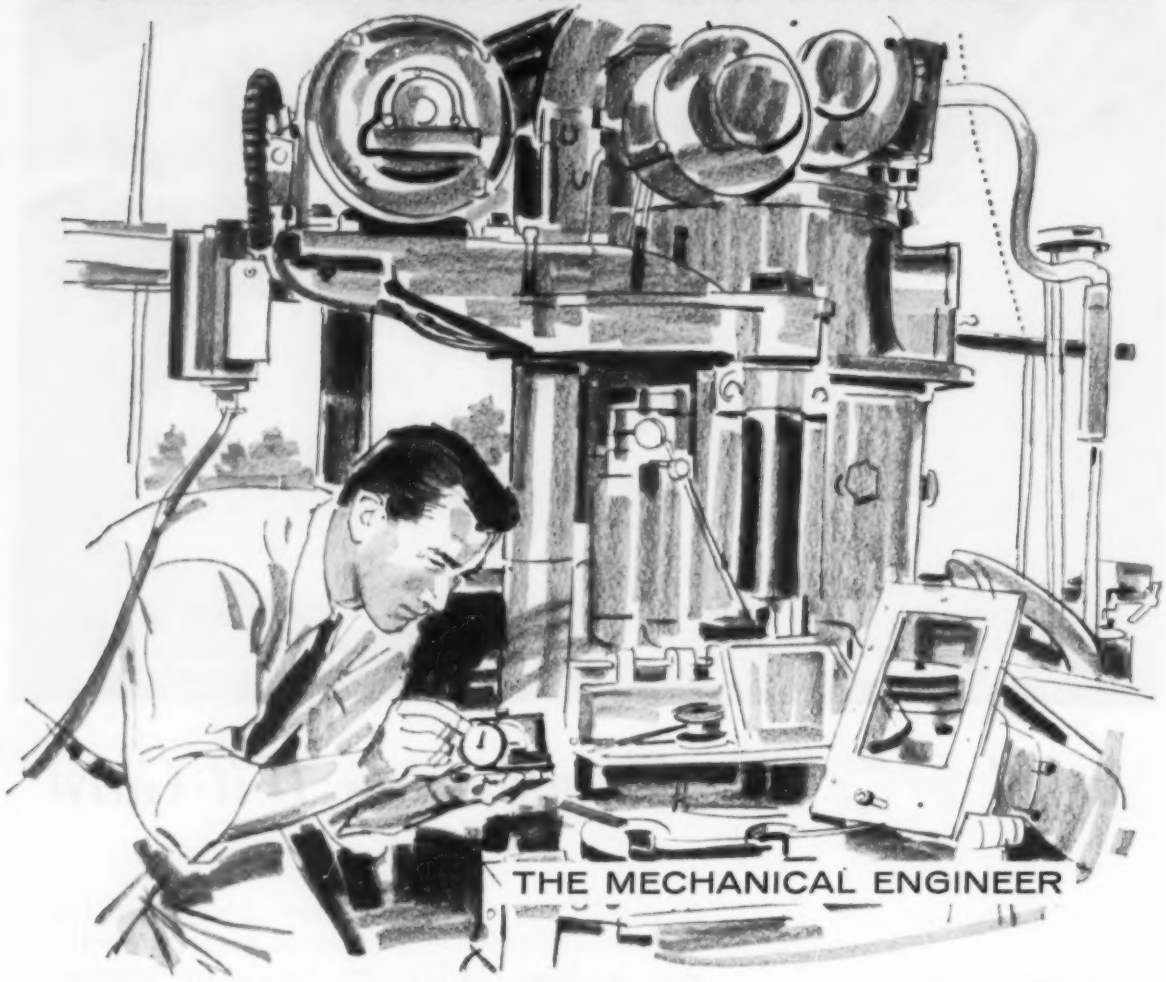

When packaging innovations demand new machines Continental customers get them first

The imagination of the mechanical engineer is indispensable in turning relatively high cost tinplate into low cost cans. His basic knowledge of physical engineering principles enables him to design equipment and devices that will turn out a perfect product with a minimum of lost motion and energy.

Applying the latest scientific theories and principles, mechanical engineers at Continental's Metal Division Research and Development Center have designed machines that will make high quality cans at 800 per minute and close them at 1200. Their problems range from those associated with massive manufacturing and handling equipment to problems involving delicate testing and measuring devices.

The mechanical engineer often works with other scientists. In the field of protective coatings, for example, his work overlaps that of the chemist and chemical engineer. In the powering and control of the mechanical equipment he designs, he works with the electrical engineer.

As a Continental customer, you can be sure that the best in scientific manpower, facilities and equipment are always working in your behalf.

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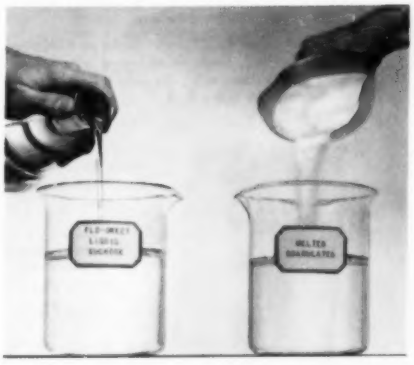
Your Flo-Sweet engineer will be glad to help you explore ways to use Flo-Sweet liquid sugars in cutting costs while boosting quality. Why not consult him soon?



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LETTERS FROM READERS

Potato Equipment Needed

I was very interested in the article by Mary Freeman on how quality potato products are frozen by Taterstate Frozen Foods in the June issue.

We are contemplating the possible production in the United Kingdom of a similar type of product, and would be very grateful to you if you could let me have full details of all the equipment necessary for this purpose. I am referring to the preparation and packaging lines only, as we already possess sufficient blast freezing tunnels. Details of through-put, and, if possible, processing methods, varieties of potatoes, and the reason why such varieties are frozen—in fact, anything you think could be of use to us.

We would propose to import the necessary machinery from the United States now that the United Kingdom import restrictions have been relaxed.

C. BELL

Production director, quick frozen foods division, Smedley's, Ltd., Wisbech, Cambs, England.

• *In addition to the information the journal has forwarded to Mr. Bell, readers interested in supplying him with equipment or information are invited to write him directly.*—Ed.

Apple Peelers?

We are interested in obtaining apple peeling machinery. Can you refer us to the makers of this equipment or give us their names and addresses so that we may write to them?

FRANK HOLESKI

Country Maid Ice Cream, 3252 West Streetsboro Road, West Richfield, Ohio.

• *We have forwarded to Mr. Holeski the names of the major manufacturers and representatives of apple peeling equipment. Equipment firms able to help Mr. Holeski are invited to write to him direct, to supplement the information we have forwarded to him.* —Ed.

Japanese Packaging Show

May I inform you of the new packaging show just held in Japan, and sponsored by the Hihon-Hoso-Times. The second, it was in Tokyo at the Tokyo Industrial building, July 7-11, and in Osaka at the International Fair building, July 21-25.

A. TAKAKI

Foreign news editor, Nihon-Hoso-Times, 1-37 Awabori-dori, Nishi-ku, Osaka, Japan.

Buyers Guide?

We would appreciate receiving from you a copy of Food Packer's Buyer's Guide and Reference Issue.

RUTH BOTTINGER

Librarian, Allied Steel and Equipment Co., Phillipsburg, N. J.

• *We would like to have been able to send a copy of the Food Packer's Buyers to Miss Bottinger and other readers who have requested additional copies. However, the supply was exhausted some months ago. Fortunately, much of the information, which in previous years has appeared in the Buyers' Guide, plus much more which appeared regularly in the Yearbook of Western Canner and Packer (both of which were merged last fall with Canner and Freezer into CANNER/-PACKER) will be available in the September 15 issue of the new and enlarged, Yearbook Number. This volume, among other things, will have reference data that will be accurate and up to date.*

Wanted—Marinated Grapes

Could you advise us as to where we can buy marinated grapes, red and green colored?

Madison Foods Co., 830 So. Bond St., Baltimore 31, Md.

• *Any reader who can supply this firm is invited to correspond direct.*—Ed.

Opportunity for Cannery

We need a canning plant for peaches, pears, tomatoes and sweet potatoes. They are produced here in large quantities and grow naturally with little effort. . . I have had some canning experience.

F. K. THAYER

24 Clinton St., Barnwell, South Carolina.

• *Readers wishing to explore Mr. Thayer's suggestion further are invited to correspond with him direct.*—Ed.

Kind Words

I know I'm not the first, but congratulations on the June C/P editorial. It was outstanding and wonderfully written.

JACK HAINES

Northrup, King & Co., 1500 N. E. Jackson, Minneapolis 13, Minn.

• *Reader Haines refers to the commentary on the importance of raw product executives in processed food quality*—Ed.

Lord Jeff MEAT® IS "CONTENT CONTROLLED"

Now . . . you get easier, more economical quality control with Lord Jeff Content Controlled Meat . . . first to eliminate guesswork in the "Lean Content" of meat, ground or boneless.

Lean Content Control gives you accurate Protein, Calorie and Moisture Content . . . insures low bacteria count, freshness, availability and results in production savings for you.

Our original Content Control Process, developed after five years of exhaustive research, plus our exclusive 60 below Jet-Frozen® method makes Lord Jeff's guarantee possible.

Guarantee: Test Lord Jeff Meat at any independent food laboratory. If lean content is not as specified by you, we will pay the laboratory fee and refund cost of meat returned.

***Testing is believing!* Return coupon and we'll send, *absolutely free*, any percentage . . . 95% . . . 85% . . . 75%, etc., lean content meat you request. Test it . . . and see!**

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. . . or any number of new products

Confronted with the never-ending array of new convenience products, many a processed food packer has said: "That's all very well for some foodstuffs—but you can do only so much with the kind of raw material that goes through my plant."

R. M. Hendrickson, poultry feeds marketing manager for General Mills, Inc., Minneapolis, Minn., set out to demonstrate how wrong such a point of view can be. Taking an egg—about as conventional a raw material as one could find—he startled delegates at a recent conference of the Institute of American Poultry Industries with more than a dozen variations of the familiar henfruit theme.

Some of Mr. Hendrickson's dream-children are illustrated on this page. At upper left is a package of frozen eggnog cubes; drop one in a glass of milk and you have a refreshing beverage. At upper right is an aerosol egg pack; whites can be put up for meringues, whole eggs for souffles, etc.

Below these are two items in rigid foil containers—"eggriddles" to take with you on a camping trip, hasty ham and—for a quick breakfast or TV snack.

Next are two possible lines of food products in which eggs are featured, but are not the only major ingredient. At left, a breakfast food; at right, an egg sandwich spread.

At the bottom are, left, a foil container for one or more shelled eggs; right, a bar of semi-dried yolk extruded inside a larger cylinder of white, which the housewife can slice off and fry like a series of fresh eggs.

Mr. Hendrickson suggests that many conventional foods have similar exciting possibilities. How many women knew they wanted a concentrated frozen orange juice . . how many children could have told you they would want to eat sugar-coated cereal . . before the first companies introduced such products, he asks.

A new convenience package, as Mr. Hendrickson demonstrates, can be a new container for a conventional raw product, a new form of a raw product or new combinations of raw products.

The best "new" product seems to keep a strong appeal of familiarity to the consumer.

How Dry Beans Are Cleaned and Packed

Wash. Co-op opens new mill for small reds and pintos

(1) BEANS TOSS AND CHURN as they flow across a gravity separator which grades them into light and heavy stock in one of the early steps in processing them for market.

Thrusting up almost 100 feet above the fertile irrigated land in the center of the Columbia River basin at Othello, Wash., is the new home of Senor Frijol.

Senor Frijol is the trade name for the small red and pinto bean processed and marketed by Washington Cooperative Farmers Assn., Seattle. The plant is a tribute to the growing popularity of these two types of beans, and to the increased importance of Washington state in their production.

Receiving and Scalping

Beans are received by dumping, direct from farmer trucks into one of three pits. They are gently raised by a large Mitchell slow-speed elevator to an A. T. Ferrell & Co. scalper, where dirt and trash are removed. This equipment has a capacity of 75 tons per hour. The dirt is returned to the producer without having a lengthy wait.

After their preliminary cleaning, the reds or pintos flow like an endless river into one of eight huge tanks, each 21 ft. in diameter by 64 ft. in height. The product is slowly and gently lowered into these storage vessels by baffled ladders. When all eight are loaded to capacity, extra holding space is available in bulk flat-storage warehouses.

Stock is withdrawn from the tanks by another and smaller Mitchell elevator. The stock is lifted 75 feet to the top of the mill. Here it feeds into a second Ferrell cleaner, where the series of screens and forced air give the beans a thorough cleaning.

Grading—Stoning—Polishing

The next step is a slight descent to the floor below, and into a Sutton, Steele & Steele grader which separates the beans by weight. They then pass over a stoner, which takes out pebbles by bouncing them uphill and into a discard bin.

A Babro combination polisher-aspirator receives the beans next. In this unit they pass through specially-selected, recleaned sawdust, which puts a luster or sheen on them like that on a newly-minted dollar.

The polished beans then flow into a Richardson scale, which discharges them into 100-lb. bags ready for lift-trucks to transport them to warehouse areas or to the shipping dock.

Industry Growth

Washington has long been a major factor in the production of dry field peas, but its prominence in the bean business is of recent date. In 1958 its output was 1,365,000 bags (100-lb., cleaned basis), fifth largest in the nation (after Michigan, California, Idaho, Colorado). Ten years earlier, however, the state produced only 69,000 bags, placing it tenth in national ranking.

Equally significant has been the growth in importance of the small red variety. This type, in which Washington specializes, has grown in U. S. output from 488,000 bags (cleaned) in 1948 to 1,365,000 bags in 1958. Washington's harvest of 1,008,000 bags of small reds in 1958 was 69% of the nation's small red crop, and 74% of the Washington pack of all varieties.

Pinto production also has increased, although more moderately. In 1948 the outturn was 3,087,000 bags, cleaned, against 4,791,000 bags in 1958. Pintos are Washington's second most important variety, but greater harvests are produced in Colorado, Idaho and Wyoming. The pinto ranks second to the navy or pea bean in U. S. production.

The Market

Most of the small red beans are brought to the Pacific Coast and shipped to Cuba. A portion of the crop is also marketed in the United States, largely for use in chili.

The larger-sized pinto moves in considerable quantity to Caribbean countries, but the biggest part is sold throughout the United States as a table bean.

The new mill at Othello was engineered and constructed by Reid-Strutt Co., Portland, Ore. Manager of the cooperative's bean department is Arnie E. Bonnicksen. Louis Denton is manager of the Othello operation.

The Association also operates a canning plant at 201 Elliott Ave. West, in Seattle, Wash. Canned products include chicken and chicken products, turkey and other specialties.

(2) COMBINATION POLISHER-ASPIRATOR, in which the pintos and small reds are passed through selected and re-cleaned sawdust. Louis Denton, plant manager, checks the output.

(3) AUTOMATIC SCALE discharges the finished product, in 100-lb. lots, into bags, after which the lift truck carries them to company warehouse or shipping facilities.

NEW COOPERATIVE BEAN PLANT at Othello. Its eight big storage tanks will hold 300,000 bushels of pintos and small reds, and its cleaning, grading and bagging equipment can prepare them for shipment to domestic and foreign markets at a rapid rate.

RAW PRODUCT OFFICIALS of John H. Dulany & Son look at a field ready for planting. The soil has been tested, it has been sprayed to kill insects and weeds, it is now receiving an inch of irrigation water, all before the seed is planted. These are applications of an established company rule . . .

Quality Control Must Be Practiced in the Field

Maryland canner-freezer seeks new ways to feed, defend and harvest raw product

BY KELVIN ADKINS

Open the door and the big, bad wolf will get you. That big wolf is competition. And the door for protection is "quality control."

That is the way the food industry is today. Quality control are words which are so commonly used that the meaning is something taken for granted.

In growing crops and food processing (they go hand in hand), research is opening up new horizons in quality control.

Everyone is Concerned

At the John H. Dulany and Son frozen food and cannery operations at Fruitland, Md., Exmore, Va. and Bridgeville, Del., quality control is contagious and seeps into every department.

Spinach with mottled leaves is more than just quality control to the inspectors on the conveyor belt. Mottled leaves shouldn't have to be removed—they just should not be, period.

F. Ridgely Todd, director of farms for Dulany, says that "spinach is a very delicate feeder." Research has proved that it suffers from "hidden hunger." The soil may be well fertilized with nitrogen, phosphorous and potassium. But a recent heavy rain may have temporarily leached out such minor elements as boron, magnesium, manganese, molybdenum, zinc, iron, or copper.

Feed the Spinach

When the spinach leaves mottle, a spray containing the minor elements is applied quickly. William Hart, chief food technologist, says: "It is dramatic to see how quickly the field will come back."

"Everyday research is showing more and more how important it is for plants to have well balanced nutrients to feed on," declares Mr. Todd. "On our farms, we never plant a thing without soil tests. Farmers are not paying enough attention to the minor elements."

During the growing season, one or more soil tests are taken as necessary by Dulany fieldman so the crops will result in the right color, vigor, and other quality control factors. The fruit or vegetable must be attractive.

"This eye appeal is so important," Mr. Hart says.

Automation in Seeding

Present planters are not good enough. Mr. Todd has been cooperating with manufacturers who are trying to perfect precision planters. He has hopes of great improvements in the quality of crops as the result of this research in engineering.

Their aim is to build a planter that will space seed uniformly down the row and each seed will be planted the same depth. This will permit all the seeds to emerge the same day. This is important, for uniform emergence affects uniform maturity.

For example, Mr. Todd reports, with ordinary planters, 60% of a field of peas may emerge in a 24-hour period. Another 20% will appear in the next 24 hours. And the final 20% will come through in the next 24 hours. Or it means that it has taken the field three days for 100% emergence.

Random tests are made twice a day just prior to harvesting peas to determine when the field is ready for harvest. Peas are harvested within six hours after the desired reading is reached on the tenderometer.

Uneven Planting is Costly

The 40% of the crop which emerged late is a waste. "This is of tremendous economic significance," says Mr. Hart.

Precision planters are needed particularly with corn, peas, snap beans, and lima beans. These crops are harvested when the right tenderness is reached.

"We have no use for anything but a fancy product, otherwise, there is too much waste," Mr. Hart believes. He feels that the precision planter, when perfected, will help solve this phase of quality control.

Mr. Todd reports that new harvesting machines are changing the cultural practices. For example, there must not be any ridging of earth along snap bean rows because the fingers of the mechanical pickers rake through this ridge and make the beans gritty.

Chemicals to the Rescue

Weed and insect control have vital influence on the quality of the finished product. Research is coming out with newer and better weed and insect treatments, but there are still better things to come.

John H. Dulany & Son has been using band applications of weed and insect killer down the row for the past two years. The crops are produced weed-free. Cut worms, flea beetles, ants, wire worms and other insects are destroyed before they have a chance to harm the plants.

"We do this on just about all of our plantings now," Mr. Todd declares. "New chemicals give us a preventative treatment, instead of the old-fashioned way of waiting until the trouble begins."

The use of so many chemicls gets into another quality control problem. That is: keeping the chemical residues in the finished food product within the approved minimums of the U. S. Food and Drug Administration. The Dulany firm does this by following U. S. Dept. of Agriculture recommendations and keeping records of all applications of chemicals and dates.

Mechanical Harvesting

Dulany harvests all kale, collards, mustard greens, turnip greens, spinach, Swiss Chard, corn, and lima beans with mechanical equipment. Mechanical pickers are getting more and more of the snap bean crop.

"I am looking forward to the day when all crops for processing are harvested mechanically," Mr. Todd says. "Although mechanization presents more quality control problems in the way of bruising and crushing, it does away with the need to do heavy labor recruiting so harvesting can be accomplished at the proper time.

"Labor is proving harder to get at the right time," adds Mr. Hart.

Boosting the entire quality control program at Dulany's is research in new varieties. The company has been cooperating with experiments conducted by land grant colleges in Maryland, Delaware, and Virginia. Last year, University of Maryland alone had 18 new kinds of peas on trial, 15 types of snap beans, and 15 varieties of carrots. Many of these are being tried on a commercial basis on Dulany farms, and are being tested for quality in the Dulany processing plants.

Quality control is making bigger steps as research advances in all phases of agriculture.

SPINACH GROWS POORLY when it must compete against weeds, and the latter pose a problem in harvesting and inspection. In the top picture, untreated spinach is seen growing at the left, while that to which an herbicide has been applied is seen at right.

INSECT CONTROL is a vital phase of raw product quality control. Results of an insecticide experiment are shown in the middle picture of sweet corn—treated product on the left, untreated on the right.

THREE MEMBERS of Dulany's field quality control team sample company products in the bottom scene. Left to right, they are: R. S. Perkins, frozen food product manager; William Hart, chief food technologist; and F. Ridgely Todd, director of farms. The company works closely with land-grant colleges and U. S. Dept. of Agriculture in test-growing and processing new varieties of raw products.

Mechanization Helps Shrimp Freezing Grow

Daniel & Dumas shell, devein, plate-freeze Gulf shellfish

(1) THREE-STEP PROCEDURE in handling freezing of peeled, deveined shrimp starts with hand-placing the crustaceans on trays.

By RUEL MCDANIEL

Although commercial fishing generally is recognized as the world's oldest industry, the shrimp fishery, which now is first in the United States in point of dollar volume, is comparatively new. In ten years it has grown tremendously in stature and with the growth new concepts of operation have been evolved.

Shrimp processing in little more than five years has developed from individual plant improvisions and methods to semi-standardization. This development is the result of many machinery developments for use in shrimp plants and the adaptation of certain basic food-processing machinery to the shrimp operation.

Port Lavaca Plant

Typical of the medium-sized shrimp processing plants that have "grown up" in recent years and have adapted modern equipment and handling as a means of speeding operations and reducing operating costs is the plant of Daniel & Dumas Seafoods, Inc., Port Lavaca, Texas. The concern handles shrimp exclusively and runs between 3,000,000 and 4,000,000 pounds of shrimp through the plant annually. There is sufficient capacity to increase this poundage by about 50% if the supply was available at the right time.

There was a time when shrimp came to the processing plant with heads on, and the first operation was to unload the catch from boats with 100 lb. baskets by hand. It then went also by hand to tables, where workers snapped off the heads. The tails, or the edible 60% of the shrimp, were iced down and hauled in bulk to some nearby wholesale outlet.

Then came packaging—by hand—whereby some processors packed a part of their production in plain five lb. cartons. After the adaptation of quick-freezing to the shrimp industry, mainly after World War II, it took its first significant stride toward modernization and mechanization.

The Daniel & Dumas operation produces every type of shrimp pack except breaded. Breading has evolved into a specialized operation in the hands of a comparatively few major concerns.

Mechanization Stressed

Handling by hand has been all but eliminated in the Daniel & Dumas plant. Fresh shrimp comes into the plant through the front of the building by trucks, which have been loaded at other shrimp ports in the general area, and by trawlers which tie up at the dock in the rear, so that the crustaceans may be unloaded from boat or truck by mechanical conveyors which deliver to the first mechanical unit inside the plant. There they get their first washing as they are unloaded and run through an automatic washer at the outside end of the conveyor line.

The conveyor delivers the shrimp into two automatic graders, where seven different sizes may be sorted automatically and deposited at given outlets, where they are caught in containers. This is a new development in shrimp processing. Formerly shrimp was sized by hand, and the judgment and conscientiousness of the workers

Mostly Frozen

In the early 1940's shrimp freezing became an important part of the annual shrimp catch. According to figures of the U.S. Bureau of Fisheries, the catch of shrimp increased some 70 million pounds between 1939 and 1956. During the same period, according to the same source, the pack of frozen shrimp has increased 50 million pounds.

	Catch	Frozen Pack
	(in thousands of pounds)	
1939	150,250	12,118
1945	191,345	24,818
1950	191,474	55,683
1951	210,000	58,591
1952	227,221	55,005
1953	260,357	56,700
1954	268,334	58,092
1955	244,335	50,045
1956	220,000	65,104
1957	NA	74,029

(2) AS EACH TRAY IS FILLED, it is picked up from the line and placed on racks which will be rolled into the freezer.

(3) WHEN RACKS ARE LOADED, the shrimp is wheeled to Amerio plate-freezers, where the product is frozen in 60 minutes.

on the grading line determined the accuracy of the separation. The sizing sometimes was done by the headers. Today virtually little or no heading is done in the plant. This phase of the operation being handled aboard the trawler while at sea. The Daniel & Dumas plant operates two Sort-Rite automatic graders placed end to end so that the conveyors may serve one or both as needed.

From sizing machines, shrimp take individual courses depending on the way they are to be finished out and processed.

Part of the Daniel & Dumas production goes from this point into five-lb. cartons, for the wholesale trade. The containers then go to the company's own flash freezers, where their contents are frozen in four hours. The cartons then are packed in cases and warehoused in a freezing and cold storage plant two doors away.

Shelled and Deveined

Another phase of the operation delivers the washed and sized shrimp to a special shelling and deveining line which has five Johnson peelers. The machines peel the shell from the shrimp, devein it and deliver it to containers in a single operation. Workers then individually wash each shrimp from the machines. The product is placed on metal freezer plates, with a capacity of about two pounds each. These plates go into racks, and when a rack truck is loaded, it is wheeled into the freezers. It takes only an hour to freeze the shrimp so individualized on the freezer plates.

After an hour, the peeled and deveined product goes to a glazing post, where cold water sprayed over it forms an icy glaze. It then goes to the packing line, where it is put into 7-oz., 1½-lb. and 2½-lb. cartons, depending on the market demand.

From the packing line the cartons move by conveyor to one of two overwrapping machines, made by Hayssen and Package Machinery. After overwrapping, the containers go to the public plant to be stored.

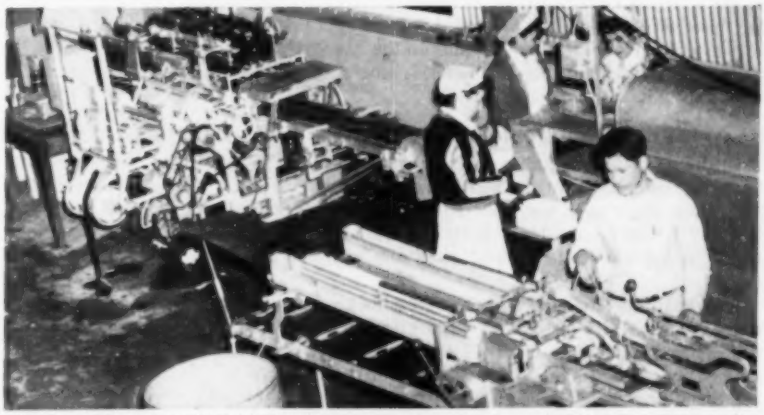
The five peeling-deveining machines handle up to 5,000 pounds of shrimp daily, and the Amerio plate-type freezer units can process up to 9,000 pounds in an eight-hour day.

Overwrapping Urged

More and more of the five-pound cartons are being over-wrapped today, and the company encourages customers to buy the pack in this form, since officials feel that over-wrapping presents a more attractive package and permits longer cold storage holding without deterioration.

There is some demand, particularly by smaller institutions, for a 2½-lb. pack of headless green shrimp, and the company meets this with an overwrapped package, since the two machines, between them, are capable of wrapping any package from seven oz. capacity to five lbs.

All packs are filled from a slow-moving conveyor belt, and at the end of each belt is an Exact Weight over-under scale, where a worker checks the weight of each pack and adds to or takes from it just prior to its going on to the closing table adjacent to the over-wrapping operation.



OVER-WRAPPING THE FILLED CARTONS, with Hayssen and Package Machinery machines, is the final step before casing the frozen shrimp for shipment and marketing.

How To Predict Tomato Maturity Dates

By C. C. Wyatt and C. A. John
Food Research Department
H. J. Heinz Co., Pittsburgh, Penna.

Studies made in 1956-57-58 by H. J. Heinz Co. show that it is possible to predict when tomatoes will be ready for picking with an accuracy of two days, plus or minus, and by a very simple method.

Start with Half-inch Fruit

The determining factor is the date on which the green tomatoes reach a diameter of one-half inch. If this stage is reached in a field during the "summer"—that is, so that the growing and ripening period will all be prior to about mid-September—the maturity date will come sooner than if the final ripening must take place in the "autumn"—late September or October.

The estimating system, therefore, calls for making careful checks over a period of several years to determine how many days are required to bring fruit from the half-inch-diameter point to full maturity, when the half-inch point is reached at various dates in July and August.

When these data are obtained, it is then possible in later years to predict the harvest date just as soon as the fruit in a field reaches half an inch in diameter.

Results at Bowling Green

A typical study of this sort was conducted at the Heinz crop research laboratory in Bowling Green, Ohio, during the past three seasons. The results are summarized in columns A, B and C of the accompanying table. The table shows that half-inch tomatoes were studied in a period ranging from July 10 to August 9. For the entire season, the mean or weekly average ripening time from this half-inch-diameter date was 46 days.

Fruit which grew to the half-inch size by July 25 or earlier, however, was ready for picking on the average in 45 days after that point was reached.

Fruit which did not become half an inch in diameter until after July 25, on the other hand, was not fully mature until a mean of 49 days had passed.

In the future, therefore, it will be possible for field men in the Bowling Green area to estimate harvesting dates on the basis of 45 days after the half-inch stage, if that point is reached by or before July 25, and on the basis of 49 days if growth to the half-inch diameter is not achieved until after July 25.

Heat Fluctuations Studied

In the 1956-57-58 studies we also were concerned with the effect of changes in the weather on the maturity dates. The three years were well-suited to this type of investigation, 1956 being considered fairly normal, 1957 very dry but with September rains, and 1958 the wettest year on record.

The heat-unit concept was used as a means of weather measurement. Fifty degrees F. was arbitrarily chosen as the base temperature. The effective heat-units were then calculated by taking the high and the low for the day, averaging them, and then subtracting the base temperature of 50 from this average. The result was termed a "degree day," which is simply another term for heat unit.

Degree Days and Days Required to Ripen F-2 (R x S) Tomatoes After Fruit Has Attained Diameter of One-Half Inch Bowling Green, Ohio—1958

Week	From One-Half Inch To Maturity — Days			Weather Bureau Degree Days			Field Thermometer Degree Days	
	A 1956	B 1957	C 1958	D 1956	E 1957	F 1958	G 1956	H 1958
July 10	46	49	41	1081	1127	907	1032	889
July 11	±1	±6	±3	±11	±127	±49	±11	±54
July 17	44	45	43	1008	1029	899	997	903
July 18	±1	±2	±5	±17	±44	±87	±21	±89
July 24	44	43	48	996	963	988	998	961
July 25	±1	±5	±3	±8	±85	±39	±7	±41
July 31	53	47	49	992	969	921	990	931
Aug. 2	±1	±6	±3	±5	±90	±37	±6	±28
Aug. 5	..	49	47	...	1029	883	...	825
Aug. 9	..	±4	±2	...	±56	±31	...	±31
Standard Mean of Fruit Tagged to July 25	45	±2 Days		998	±71 Degree Days			
Mean of Fruits Tagged After July 25	49	±2	"	959	±52	"	"	
Mean for Entire Season	46	±2	"	984	±64	"	"	

To calculate the temperatures, we used data from U. S. Weather Bureau, whose station is about a quarter-mile from the fields studied. We also use our own field thermometer, an instrument mounted on a wooden frame which shades it from the direct rays of the sun.

During the three-year test period, and also during 1953 and 1955, several varieties of tomatoes were checked, including Early Red, F-2 (Rutgers x Stokesdale) and Cornell 53-548-2. No differences in ripening rates were observed.

Plants tend to break apart more during the latter part of the season, and thus to expose more of their fruit to the direct rays of the sun. This raises the temperature of the tomatoes, as MacGillivray has shown (1), and thus speeds up the ripening process. This tends to make variations in maturity dates greater in the late season than in the early, but is not enough of a factor to make the later fruit (as a whole) ripen as rapidly as the earlier.

Humidity, light intensity, photoperiod, mineral nutrition, root temperature, watering and root medum are other factors which could be taken into account, but were not studied in our experimental work. However, Went (2) has reported that these could be varied widely without changing the rate of stem elongation—and hence without great effect on the maturity date.

Conclusion

The degree-days obtained from the Weather Bureau data and from our own thermometer are shown in columns D-E-F and G-H of the accompanying table. From these data several conclusions may be drawn:

1. A tomato fruit, on the average, can be expected to be ripe 46 days after it has reached one-half inch in diameter.
2. The variation from this average was two days.
3. Despite the cooler weather of 1958, the ripening period was not significantly different from those of the two earlier years.
4. Thus, although counting heat-units or degree-days is a satisfactory method of predicting the harvest date of tomatoes, it is no more so than the much simpler method reported earlier in this article.

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PEACHES for Canning and Freezing

This is the second in the series of articles by fieldmen, university and experiment station scientists and research workers in firms concerned with raw product equipment and supplies. product, equipment and supplies. —Ed.

Peach Varieties for Processing in Michigan

By Stanley Johnston

Research Prof of Hort., Michigan State Univ., Agriculture Experiment Station, South Haven, Michigan

While the fresh market has been of prime importance for Michigan peaches, commercial processing by canning and freezing is steadily increasing. A succession of both freestone and clingstone varieties suitable for processing will insure greater use of peaches for this purpose.

The most important freestone varieties for processing in Michigan at present are Elberta and Halehaven. Both are only reasonably satisfactory. Richhaven, a newly introduced variety, will probably replace Halehaven as a processing variety.

Several promising freestone selections have been made in the Michigan State University's peach breeding project at the South Haven Experiment Station. These selections are undergoing repeated processing trials and it is believed that at least one variety maturing earlier than Richhaven, and one ripening between Richhaven and Elberta will be introduced in the near future. This would provide a succession of four freestone varieties satisfactory for commercial processing in Michigan.

There is considerable interest in clingstone peaches in Michigan for processing. Ambergem is the only clingstone variety grown in the state, and it is estimated that there are about 2,000 acres of this variety in production at present. Processors are anxious to have other clingstone varieties ripening in succession. During the past three years 20 promising selections have been made from the South Haven Station's trial orchards. It is hoped that three or four of these will be sufficiently worthy to become standard varieties.

Processors prefer varieties with no red color in the pit cavity. Canners will tolerate a small amount of red color but freezers and preservers much prefer to have no red color at all in the pit cavity. A search is being made in the Station breeding plots for varieties free from such color and being satisfactory in other characteristics.

MECHANICAL BULK HANDLING methods have been developed to the point where they are in use in several West Coast plants.

Mechanical Harvest of Peaches

By Dr. Michael O'Brien

Dept. of Agricultural Engineering, Univ. of California, Davis

More information is needed before mechanical harvesting of peaches becomes a reality. The concept of removing fruit from trees placing it in bulk bins, and delivering it to cannery lines by mechanical means is coming closer to reality. The bulk handling portion of the problem is gradually being accomplished.

Considerable basic information has been obtained regarding the mechanics and forces involved in removing fruit from the tree by mechanical means. In anticipation of the need for mechanical harvesting, some preliminary ininvestigations have been made. These investigations have dealt primarily with mechanical shakers or knockers and catching frames. It is possible to remove the fruit by this means and catch it in frames; however, before this method of harvest can be adopted, certain problems must be solved.

The principal problems associated with this method of harvest, and which warrant further investigation include:

1—Fruit damage resulting from its striking limbs and branches.

2—Inability to do any real selection for maturity level in the harvested fruit.

3—The effect from mechanical harvest on the amount of fruit dropping from trees between picks.

Solving the first problem may include structuring the tree in such a way that a minimum of fruit will strike limbs or branches when it is removed from the tree. This system, however, would require several years of judicial pruning of trees, and would be adapted

to new orchards. A different tree spacing, possibly hedgerowing, may fit into solving the problem.

A solution for the selection for maturity problem in mechanical harvesting does not seem to be forthcoming at this time. Some of the proposed solutions are quite controversial and would indicate the need for industry-wide cooperation in answering the problem.

At present there is not enough known about the effect of mechanical harvesting on the amount of fruit dropping from trees between picks to indicate any course of action. It is only known that the amount of drop varies between trees which have and have not been mechanically harvested.

Although some of the problems involved in mechanical harvesting of peaches have not been solved, or possibly even recognized to date, their solution is in the realm of possibility.

Fungicide for Scab, Brown Rot, Rhizopus

By George H. Soule

E. I. du Pont de Nemours and Co., Wilmington, Dela.

Peach growers have a new weapon against fruit rots and scab for the 1959 season—the result of several years of field trials and residue studies by the Du Pont Company to assemble data required for commercial recommendation of its "Thylate" thiram fungicide for use on peaches.

This fungicide was first offered commerically to fruit growers in 1956, as a control for apple scab and rust. Eleven years of field trials in Connecticut and additional tests in other states had preceded marketing of the product which is now widely used by apple growers.

Meanwhile, test work with peaches got under way, and the new peach recommendation is based on experience in 11 states, mostly during the 1955-58 period. The fruit phase of peach brown rot was present in eight different states where tests were conducted, and Rhizopus rot occurred in conjunction with brown rot in three of the test areas. Most of the evaluations of fruit rot control involved severe conditions in which fruit was held for extended periods after harvest, usually at room temperature, prior to scoring for rot development.

In one New York test, for example, after five days' room temperature storage under humid conditions, fruit from plots sprayed with "Thylate" thiram fungicide had only 33% rot, compared with twice as much on fruit sprayed with another organic fungicide, and 86% rot on fruit sprayed with wettable sulfur. In a South Carolina test, treatment with "Thylate" resulted in the highest percentage of healthy fruit of the 11 fungicide programs in the test. A Maryland report showed that "Thylate" gave excellent control of brown rot on a most susceptible variety in a season when heavy rains preceded harvest.

For scab control, peaches in a North Carolina test showed a scab index of six (on a 0-100 scale) compared with 74 in untreated plots. In South Carolina, plots treated with "Thylate" had no scab-infected fruits, compared with over 45% on untreated plots and up to 15% in plots treated with less effective fungicides. In Mississippi, plots treated with "Thylate" showed scab index ratings of 4.8 to 6.0 compared with the index of 31.8 on the untreated check.

"Thylate" thiram fungicide is one of the family of dithiocarbamate fungicides developed for horticultural use by the DuPont Company. This family includes "Fermate" ferbam fungicide, "Parzate" zineb and nabam fungicides, "Manzate" maneb fungicide, and "Zerlate" ziram fungicide.

Evidence compiled during this long period of experience indicates that "Thylate" has premium qualities as a fruit fungicide, ranking wtih the best of presently used materials in control of peach diseases, and most major apple diseases. It can be used in mixed peach and apple orchards, or mixed variety plantings. It leaves the fruit with a fine-quality finish at harvest time, resulting from the combination of excellent disease control and no chemical injury or russeting on fruit or foliage.

States where "Thylate" thiram fungicide has been evaluated for control of peach diseases include Alabama, Connecticut, Indiana, Georgia, Maryland, Mississippi, New York, North Carolina, Oregon, Pennsylvania, and South Carolina.

Usual recommendation for use on peaches is one and a half to two pounds per 100 gallons of water in normal spray concentrations. It can be used in concentrate sprays up to eight times normal concentration. The higher dosage is recommended when disease conditions are severe, and the lower rate is adequate for normal conditions.

For fruit rot control, "Thylate" should be applied at petal fall, again when most of the shucks are off the young peaches, and then again about one month before harvest. During the last month before harvest, where rot is a severe problem, applications should be repeated at seven-day intervals. Scab control with "Thylate" begins with a petal fall spray, and three to six cover sprays at 10- to 14-day intervals, until the disease is well under control.

The product is marketed in five- and 50-lb. bags.

Ripening Conditions for Northwest Frees

By Dr. A. M. Neubert

Western Utilization Research & Development Div., USDA, Prosser, Wash.

Correct maturity at harvest followed by ripening before processing is the key to quality, particularly flavor, in canned and frozen freestone peaches. Freestones that can be ripened fully soft in 4 to 7 days after picking yield products of optimum quality. Fruit picked riper suffers severe damage during harvest and the flavor of the processed products tends to be mild and the flesh soft and coarse. Greener fruit does not develop satisfactory flavor and the flesh tends to remain hard.

Determining when freestones have reached optimum maturity for picking requires experience and judgment. Firmness of the flesh appears to be the best objective index. Elbertas showing an average firmness of 5 to 6 lbs. on the pared cheek, using a 5/16-inch plunger on a Magness and Taylor tester, will ripen in 5 to 6 days unless cold stored. Color must not be solely relied on because variations in cultural practice can make color very misleading as a maturity index. Elbertas grown under conditions of high nitrogen fertility will remain green until they become quite soft, while low nitrogen conditions produce fruit that becomes yellow while still hard. Two or three pickings are usually desirable to obtain most of the peaches within the desired maturity range. Practical considerations, however, often reduce commercial harvests to a single picking.

Freestones develop their best quality when ripened at about 75°F. Higher temperatures result in poor flavor and a deeper, more orange flesh color. Peaches ripened below 70°F. do not always develop the best flavor and the flesh tends to remain light yellow. Confinement of the gaseous emanations about the fruit hastens ripening and development of yellow color. Some commerical processors report that the addition of 1000 parts per million ethylene to the ripening rooms further accelerates the ripening process. Low humidities should be

Act Now for Space in the 'Yearbook Number'

Published September 15

A new and improved volume is in the making. It's called the "Yearbook Number."

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For instance, a modern approach on statistics. In the four big fields of canned, glass, dry and frozen foods, national figures have been collected and are listed comprehensively.

This is just one reason why the Canner/Packer Yearbook Number will become a fixture on the desk of the Manager of the sales department all year long.

Reference Data—Complete, Accurate and Current:

Production, procurement and traffic men will replace the present jumble of reference books they presently need with the most complete volume of reference data ever compiled. A one-book "library" for every department of the processed food plant.

Here is a list of a few of the major items in the yearbook:

1. The Gold Medal Award winners—50 outstanding new or improved products for food processors.
2. Processed food equipment and supplies are listed in a classified index. The suppliers are listed in an alphabetical index.
3. Top scientists report on research advances.
4. Leading executives summarize the status of food products in their fields.

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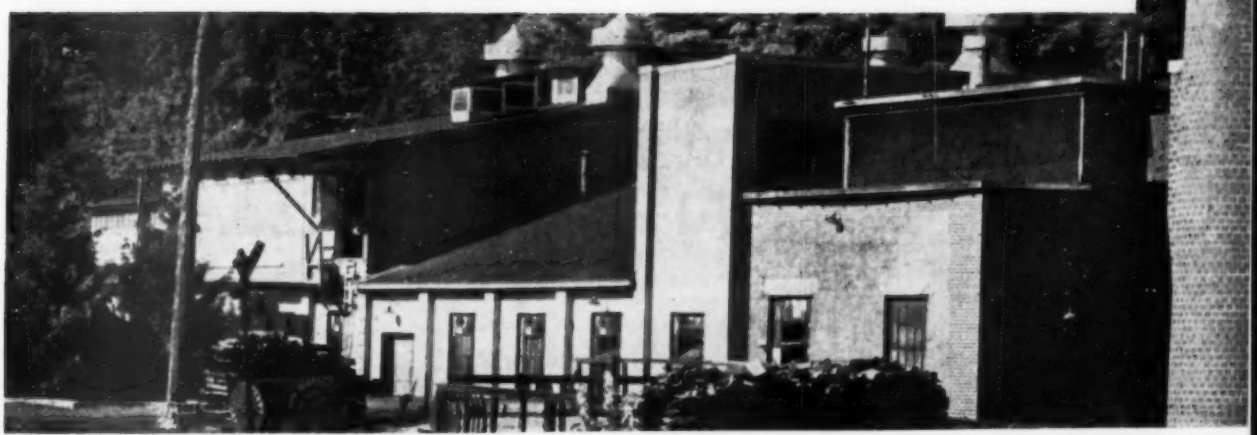
Processors advertising in the Yearbook Number will be included in a big 100-page promotion booklet, Food Distribution, at no extra charge. This booklet will be distributed to 3,000 major buyers of processed foods.

In September, remember there will be two issues, the regular issue of September 1 and on September 15 . . . The Yearbook Number.

CANNER/PACKER

yearbook

NUMBER



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—and its people who buy Savings Bonds and strengthen America's Peace Power

Every family and every industry in this country benefit, directly and indirectly, from the work of our great chemical industry. Those whose lifework is in chemistry may well take pride in the vast good that stems from their profession. Thousands upon thousands of people in the chemical field are proud, too, of their share in America's Peace Power, for they are making regular purchases of U.S. Savings Bonds.

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JAMES C. VICKERS is pictured here practicing his highly specialized skills in one of our country's great chemical plants. Mr. Vickers is typical of the thousands of expert workers in this field who are buying U.S. Savings Bonds regularly. Mr. Vickers uses his company Payroll Savings Plan to make regular contributions to the Peace Power of his country.

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avoided, particularly under strong forced air circulation, because peaches lose moisture rapidly under such conditions. Very high humidities should also be avoided because they may contribute to development of decay. Storage at 32°F. is best for holding peaches during seasonal peaks.

Decay during post-harvest ripening is a serious problem in most freestone producing areas. Orchard sanitation and spraying is the best control for brown rot and where this rot is serious, ripening at 65°F. has been recommended to reduce decay. No orchard control is now available for Rhizopus and best control is accomplished by cold storage for 10 to 14 days before ripening.

New Freestones for West Coast Processors

By Dr. Harold W. Fogle

Irrigation Experiment Station, Prosser, Wash.

The freestone-peach-canning industry in the Pacific Northwest and California is based on a high-quality pack of Elberta. To gain acceptance, any new variety must compare favorably with Elberta in canning characteristics and in production and handling qualities. Few have equalled Elberta in all respects. The bulk of canned freestone peaches may continue to be Elberta for some time.

There is a need, however, to spread the harvesting season. A succession of varieties of similar quality ripening during the month preceding Elberta, and perhaps the 2 weeks following, would permit more efficient use of facilities. A start has been made in this direction through the use of Early Elberta (Gleason strain). Sufficient volume, however, is lacking for most processors to start canning peaches a week earlier to handle this variety.

In Elberta season, Fay Elberta (Gold Medal in the Northwest) and Redskin show promise as alternative varieties to Elberta. Fay Elberta is an excellent canning peach. Some years the fruits show fuzzless rusty spots which do not peel with lye. Redskin has more exterior fruit color. It apparently drops less fruit before harvest and shows more coarseness of flesh and color around pit than Elberta. The recent trend to lye-peeling of freestone varieties has removed the primary objection to J. H. Hale, which also has more pit color and is coarser than Elberta.

Sunhigh, ripening about 2 weeks before Elberta, is a high-quality variety worth trial. Burbank July Elberta, although slightly soft for handling and sometimes small when cropped heavily, ripens 3 weeks before Elberta and cans satisfactorily. Triogem, ripening a month before Elberta, gives a fine-textured canned product of high quality.

Redhaven, which ripens 5 weeks before Elberta, has been planted extensively in the Pacific Northwest. A tendency to tight pits, retention of greenness and coarseness around the pit and mild flavor detract from its desirability for canning. Ranger ripens more uniformly and has finer texture than Redhaven but lacks the fresh-fruit attractiveness of Redhaven.

J. H. Hale is the standard for frozen peaches, but Elberta is used extensively. Rio Oso Gem, ripening about 10 days after Elberta, has the same attractive redness around the pit and less coarseness than J. H. Hale and is therefore the best variety tested for freezing. Fay Elberta (Gold Medal), Early Elberta (Gleason strain), Sunhigh and a few other varieties also are adapted to freezing. Redhaven is frozen commercially to some extent but it is not considered well-adapted to this use.

Fertilizer Needs of Peaches

By Dr. P. D. Caldis

Director of Agricultural Research, California Packing Corp., San Leandro, Calif.

The end result of fertilizing peaches, as any other crop, is the production of profitable quantities of fruit of the best possible quality for consumption either canned or fresh, and this desirable and profitable objective could not possibly be obtained from an inadequately fertilized tree. Of all deciduous fruit trees, the peach requires more units of nitrogen per tree, per year, than any other fruit tree, and the response to nitrogen with peaches is usually outstanding.

As guides to proper fertilization of peaches, soil and tissue analyses are invaluable in maintaining the proper balance of nutrients, based not only on what the soil may offer, but also on what the root system may take up and use. Over-fertilization, particularly with nitrogen, may prove as disadvantageous as under-fertilization; but in most cases, particularly in the West, nitrogen is needed every year from the time the tree is set in the orchard.

The unproductive early years may be shortened by growing the tree with adequate fertilization as quickly as possible to proper size and shape. Then production depends on the bearing area established and the foliage produced yearly to support a large crop annually. A nitrogen content in the leaves of 3.25% sampled from June 15 to July 15, will give optimum growth without luxury and waste. This may be accomplished by annual applications of 1 to 1.5 lbs. of actual N per mature tree, per year, regardless of the source.

The time of application varies from early spring, when the cover crop is turned under, to late spring, soon after thinning. The soil texture, soil fertility, and climate are factors influencing applications.

Phosphorus applications have not proved advantageous even when an-

DIESEL TRACTOR is used for cultivating orchard near Modesto, Calif.

nual crops and the cover crop show a marked response. Peach trees are able to forage for their modest needs in this element. Peach leaves from highest producing orchards contain in phosphorus only 1/20th the amount of nitrogen.

Potassium, if not easily available, either through a restricted root system or because it is in short supply in the soil, should be provided. Fruit size, productiveness, and tree health require a minimum of 1.25% in the basal leaves of the current year's growth, sampled as for nitrogen. When the fixing power of the soil is high, for quick and lasting response, potassium may be added in massive doses (30 lbs. per tree). Application may be at the bottom of the furrows in very early spring, once in three or more years, as indicated by leaf analysis. Ordinarily we may expect response when the potassium content of leaf dry matter is lower than .75%, severe symptoms show at .25%, and there is ample supply at 2.75%.

Minor elements may be needed only in specific instances when specific symptoms indicate it, such as little leaf, leaf burn, chlorosis, or interveinal leaf markings.

Clings for Processing Join Georgia's Frees

By H. L. Cochran

Manager, Raw Products Div., Pomona Products Co., Griffin, Ga.

Prior to the late nineteen-forties practically all peaches grown commercially in the South were of freestone varieties planted especially for shipment to the fresh market. Thus, the history of the peach canning and freezing industry in this geographical area has been, that in seasons of heavy production sizable quantities of fruit have moved to the processors, while in seasons of light production, brought about primarily by late killing frosts, the fresh market price has usually been such that few peaches could be contracted for canning or freezing purposes.

With the development and introduction of several new, early, yellow fleshed, clingstone and semi-clingstone varieties by the USDA Field Horticultural Station at Fort Valley, Ga., and the Michigan Experiment Station at South Haven, there has been a very sizable increase in the number of peach trees planted in the South during the past five years. A large percentage of these new plantings are made up of varieties that ripen between the dates of May 25th and June 25th, and all were developed for shipping purposes and not for processing.

In as much as the volume of clingstones and semi-clingstones processed in the South is very small, this planting of a preponderance of early shipping varieties is not a healthy condition, and is being given more than casual consideration by growers and processors alike. Because of this situation, and in an effort to be assured as near as possible of a pack from year to year, there are processors in the South who have planted and are presently planting their own orchards with desired freestone varieties. Others are making long-time contracts with growers having producing orchards to take their production from year to year on a market price basis.

Of the many freestone varieties that have been grown and evaluated for commercial processing, those lending themselves best to these conditions are Halehaven, Early Elberta, and Regular Elberta. Because of the uneven ripening of the fruit of these varieties during certain years, however, they are by no means ideal.

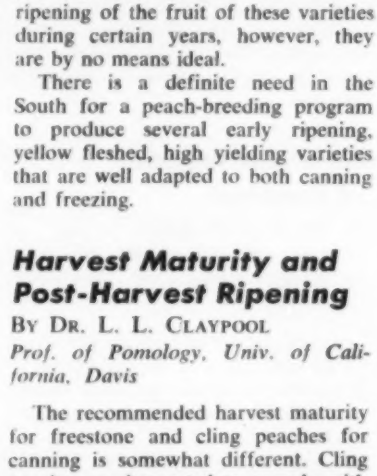
There is a definite need in the South for a peach-breeding program to produce several early ripening, yellow fleshed, high yielding varieties that are well adapted to both canning and freezing.

Harvest Maturity and Post-Harvest Ripening

By Dr. L. L. Claypool

Prof. of Pomology, Univ. of California, Davis

The recommended harvest maturity for freestone and cling peaches for canning is somewhat different. Cling peaches are harvested to comply with a flesh color standard that presumably will result in choice quality in the canned product. This is at a stage approximating tree ripeness. Because of their firm texture, cling peaches hold their shape after processing when harvested at this stage. Over-mature fruits result in a poor quality product and are not acceptable in the standards. As cling peaches soften they are more susceptible to bruising during harvesting and handling operations and transportation to the cannery. Varieties differ somewhat in their firmness characteristics ranging from about 6 to 12 lbs. on the pared cheeks using the 5/16 in. plunger with the standard fruit pressure tester when mature.



HARVEST MATURITY for canning peaches is determined by color standards and by pressure tests.

Cling peaches have maximum dessert quality when they are processed as soon after harvest as practicable. Quality deterioration is rapid after harvest, particularly at warm temperatures. While considerable quantities of cling peaches may be cold stored at times, it is important to realize that quality-wise storage is undesirable. When storage is desirable, the peaches should be cooled rapidly and held at 31°-32°F, preferably for not more than 15 days.

Freestone peaches harvested at or near the tree ripe stage are likely to result in an unsightly processed product and are very subject to bruising during harvesting and hauling operations. A much more attractive product will be obtained if harvesting is accomplished sometime prior to this, so that the fruit requires about 4 days to ripen when held between 70°-75°F.

Elberta peach types used for processing in California will have a flesh firmness of about 10-12 lbs. at this stage of maturity. The best ripening temperature is thought to be between 70°-77°F with a humidity of about 90%. Freestone peaches harvested and ripened in this manner will have very good appearance for freestones, including color, and will be as good in flavor as tree-ripe fruit. The major problem to controlled ripening in California has been the prevalence some years of rots of Sclerotinia and Rhizopus species. Solutions to rot problems have not been found yet. The processor of freestone peaches will have to determine for himself the risk involved in controlled harvesting.

Seek Flavor Gain in Calif. Clings

By Dr. L. D. Davis

Prof. of Pomology, University of California, Davis

Developments in varieties of clingstones for canning in California have been continuous but generally slow throughout the entire history of the in-

dustry. The developments have usually been in response to some industry need such as varieties with maturity dates which would provide a more even distribution of tonnage over the season, varieties that would increase the length of the harvest season or those which would provide replacements for a weak area in the established variety pattern. New developments cover a series of years rather than the most recent ones.

Rather definite steps or phases can be recognized in the changes of the varietal pattern. Three will be mentioned.

The first of these occurred in the early 1900's when selections were made from chance seedlings to fill the interval between the Tuscan and the Phillips Cling; the former ripened about the end of the third week in July and the latter about the first week in September. This group of selections, appropriately called the "new midsummers," included such varieties as Paloro, Peak, Johnson, Gaume and Halford, varieties that are highly important today.

The second major change in the variety pattern involved the creation or selection of varieties to lengthen the harvest season which had been shortened to approximately four weeks by the drastic reduction of acreage in the 1930's. In this removal of trees the Tuscan and Phillips Cling plantings had been largely eliminated. This group of selections can very well be regarded as a new development since it is an important part of the most recent change and certain features of it are currently in progress.

Only those varieties which have been most widely planted will be mentioned. The U. S. Department of Agriculture released 12 clingstone varieties for trial from 1935 to 1950; five of them have been planted rather extensively:

Fortuna, Vivian and *Cortez* extend the season for about 19 days ahead of Paloro; they ripen in the order given with Fortuna being the earliest.

Coronado ripens after Halford and extends the season, on the late end, seven to 10 days.

Carolyn. This ripens slightly later than the Gaume and has been used for a replacement for the latter.

The following varieties have originated in private rather than public sources:

Loadel ripens about 19 days before Paloro.

Wiser ripens in late Halford season.

Chandler, Sullivan #2, Rand and *Stuart (Gomes)* all ripen about a week after Halford.

The final phase to be mentioned comprises the program to improve the flavor quality of canning clingstones. All the varieties mentioned in the foregoing discussion have flavor qualities so much alike that they have been characterized as conventional varieties. The following two varieties have a flavor that is judged to be superior to the conventional ones and are the first to be released under this program:

Dixon 1 and Dixon 2. These two varieties resulted from crosses made by the late F. A. Dixon of the Canners League of California. After Mr. Dixon's death these two, along with other material, were turned over to the University of California for evaluation. These two varieties were introduced in 1956. They are very much alike and ripen at the same time—about nine days before Paloro.

The Department of Pomology of the University of California has an active breeding project looking toward the improvement of the flavor quality of canning clingstones.

HARVEST SEASON FOR California clingstones has been lengthened by the development of several new varieties.

Fungicide Cleared for Post-Harvest Treatment

By Marcia Lee

California Spray-Chemical Corp., Richmond, Calif.

The fungicide, captan, made news recently by virtue of being officially cleared for post-harvest treatment of fruit to check spoilage.

Research tests leading to the acceptance of captan as a post-harvest dip or spray for peaches showed a 60% to 80% reduction in spoilage loss for treated vs. untreated fruit. The dosage recommended by California Spray-Chemical Corp. for this use is 1¼ lbs. of Orthocide Fruit Wash (80% captan) per 100 gallons of water.

In discussing post-harvest treatment, Calspray spokesmen emphasize that captan's major protective action begins in the orchard—that the treatment of fruit after picking gives extra protection well worth the cost but is of less economic significance than the applications made during the growing season.

"On the face of it, pre-harvest treatments that affect the quantity and quality of fruit would seem to be of greater concern to the grower than to the processor, but the breakdown of fruit, or its susceptibility to rot organisms, begins while the fruit is forming. Two shipments of peaches arriving at the cannery may be identical in quantity and in appearance, but one, because of inferior protection during the growing season, may produce just half as many cans or packages of marketable fruit.

"It has been the great problem of agricultural chemistry to develop chemicals that do the most damage to insects and disease organisms and the least damage to the crops themselves. The very fact that captan has been cleared for post-harvest use is evidence of the relative safety of the material. (Actually, refined formulations of the chemical are being used in medicinal preparations for humans.) As for the reaction of the many varieties of crops on which it has been used, there is testimony from hundreds of growers and experimental researchers that captan-treated plants are more healthy and vigorous than untreated plants *even in those favorable seasons when disease organisms are not a problem.* Since captan has no hormonal properties, science has yet to determine just why these benefits come to be, but

they are there and compound themselves over years of use.

"Among the processors investigating captan's value is Russell Hurlbut, Hurlbut Bros. Co., Inc., Wilson, N. Y. A digest of a report of his tests will aptly illustrate the benefits to be expected from growing season use of captan:

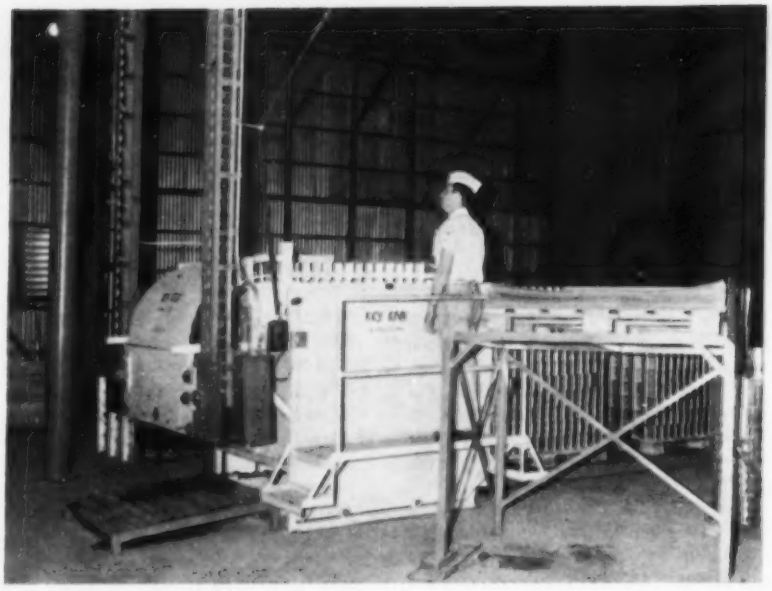
" 'While it was impossible to make a comparable study of all lots of peaches we received this season, we had occasion to conduct a test with Orthocide which we consider valid and extremely important.

" 'The two lots of peaches involved were picked on the 19th of September and held in cold storage at approximately 32° until October 4th. One lot was 183 bushels of Elberta peaches sprayed with Orthocide 50 W (50% captan) during the growing season. The second lot was 166 bushels of Elberta peaches from one of our best growers known to have a complete sulfur spray program.

" 'On October 4th the two lots described were placed side by side in the ripening shed. On October 11th, we started our run of these lots. The sulfur sprayed lot had to be sorted; from the 166 bushels we were able to salvage only 16 bushels. At 10 o'clock we started our run on the Orthocide-sprayed lot and finished by noon. We followed the loss through the halving and pitting and on until the product was finished and in the can ready for processing. We got less than one bushel of waste other than normal shrinkage through the halving and pitting operation and again through peeling, inspection and filling sections. The net canning weight of the 183 bushels of Orthocide-sprayed peaches was 32 lbs. of peeled peaches in cans per bushel. This is in contrast to our season's average of 24 lbs. per bushel.

" 'I might add that the sulfur-sprayed peaches remained in a greener condition while the Orthocide-sprayed showed a greater increase in color. We, as a company, are going to insist that all peaches have an Orthocide spray program from the pink stage throughout the season and are working out a system whereby the grower will receive the difference in cost for using Orthocide.' "

Dr. Edwin Gould at West Virginia University's Experiment Farm has conducted, since 1952, one of the most comprehensive field tests ever undertaken using a number of the popular commercial fungicides on five varieties of apples. Captan - sprayed plots, for every variety, rated No. 1 on the basis of yield, scab control, and on the color and finish of the fruit.



DE-PALLETIZER IN CANNING PLANT receives cans in pallet pack from storage. Cans are unpacked and moved into can lines.

Pallet System for Handling Cans Cuts Labor 60%

Walla Walla Canning Co. receives cans in pallets. De-palletizer is semi-automatic

A new system of handling cans in pallet packs has been introduced in the West in recent months. Can-making companies have machinery to pack the newly-made cans in pallets. Canners have de-palletizing machinery to unpack the cans.

The result has been to smooth out can production at the can plant and to eliminate can shortages and shipping jams at the height of the season. Likewise, the canner has been able to reduce can handling costs at his plant.

The Walla Walla Canning Co., Walla Walla, Wash., recently simplified its empty can handling operations with the installation of a new Key Kan de-palletizer designed for high speed, semi-automatic handling of pallet packs.

"This new equipment enables one man to feed two high speed can lines with very little effort," Richard G. Boatman, general production manager of Walla Walla Canning Co., reported.

In standard practice under this system, the pallet packs are stored at the plant, many of them on a pre-seasonal basis. When the cannery starts up its lines, the pallet packs are brought from the storage area to the Key Kan de-palletizer by lift trucks. Cans are fed into the can lines through the de-palletizer—operated by one man.

"The de-palletizer is manually operated and controlled," Boatman reported. "It is adjustable to virtually all can sizes and pallet sizes and will fit most installations without modification. The waterfall and divider assure safe can handling and permits discharge to either side or both, feeding one or two can lines simultaneously.

Boatman said that the problem of switching cars and ordering cans ahead to meet fluctuating production volume is gone. The problem of ordering cars in advance for each day's run has been eliminated.

"The number of employees used in our can department has been reduced 60 per cent. Demurrage has been completely eliminated. Can damage has almost disappeared. The entire canning process has been smoothed out to such an extent that the changeover in can handling more than paid its way in the first season.

You can spray most vegetables with malathion up to 72 hours from harvest without exceeding residue tolerances established by law.

VEGETABLE	tomatoes	broccoli	cabbage	melons	cauliflower & brussel sprouts	beans
INTERVAL days between last spray and harvest	1	3	3	1	7	1

CYANAMID

MALATHION
INSECTICIDES

CANNED FOOD PRICES

F.O.B. packing plant, per dozen containers, as of the first of the month indicated. Data compiled from latest available price lists of individual packers. Districts as follows:
ATLANTIC—Me., N. H., Vt., Mass., Conn., N. Y., N. J., Penna., Md., Del., Va.
SOUTH—N. C., S. C., Ga., Fla., Ky., Tenn., Ala., Miss., Mo., Ark., Ia., Okla., Tex., P.R.
MIDWEST—Ohio, Ind., Ill., Mich., Wis., Minn., Iowa, S. D., Neb., Kans.
WEST—Alaska, Ariz., Calif., Colo., Hawaii, Ida., Mont., N. M., Ore., Utah, Wash., Wyo.

CANNED FRUITS

	June 1, 1959		July 1, 1959	
	—303—	—10—	—303—	—10—
APPLES, ex. hvy. wtr.				
Atl.		9.00		
Wes.		9.50		9.00
APPLESAUCE, fancy				
Atl.	1.30-1.35	7.00- 7.25	1.30-1.35	7.00- 7.25
Wes.	1.55	8.50	1.35	8.25
APRICOTS, ch. hvls.				
Wes.	2.55	13.85	2.05	11.70-13.85
CHERRIES—RED TART PITTED, water				
Atl.				
Mid.	2.65-2.70	13.50	2.70	
Wes.				
CHERRIES—SWEET, Wes. ch.				
dark			2.95-3.00	17.60
light	3.35	19.45	3.27-3.40	19.45
CITRUS—GRAPEFRUIT (303 & 46 oz.) fcy. swtnd.				
So.	1.87	5.40	1.85	
CITRUS-SALAD (303 & 46 oz.) fcy. swtnd.				
So.	2.80	8.50	1.87-2.80	8.75
CRANBERRY SAUCE (No. 300) fcy. puree				
Atl.	1.85			
FIGS, choice				
Wes.				
FRUIT COCKTAIL, choice				
Wes.	2.25-2.30	13.20-13.50		
FRUITS FOR SALAD, fcy.				
Wes.	3.30	17.75		
OLIVES, RIPE (No. 1 Tall)				
Wes. lg.	2.55	15.90	2.65	16.60
Wes. ex. lg.			2.70	16.90
PEACHES—CLINGSTONE, ch.				
Wes. sliced	1.92-1.97	10.40	1.97	10.40
Wes. h'vs.		9.90	1.97	10.40
PEACHES—FREESTONE, ch. hlvs. Elb.				
Atl.				
So.				
Mid.				
Wes. fcy.	2.10-2.22	11.20-12.35	2.02-2.07	10.90-11.20
PEARS, ch. hlv. Bart.				
Mid.				
Wes.	2.22	12.35-13.25		
PINEAPPLE (No. 2) Wes. fcy.				
Sliced	3.47	15.00	3.47	15.00
Chunk				
Crushed	2.80	11.75	2.80	11.75
PLUMS—PURPLE, ch.				
Wes.				

CANNED VEGETABLES

	June 1, 1959		July 1, 1959	
	—303—	—10—	—303—	—10—
ASPARAGUS (No. 300) fcy. lg. green				
Atl.	3.50		3.40	
Mid.	4.00		1.75-1.90	11.50-12.00
Wes.	3.40-3.50		3.35	
Wes. white	2.95-3.10		2.90	
BEANS, GREEN LIMA, fcy. small				
Atl.	2.00-2.40	12.25	2.00-2.10	12.25
Mid.	2.15-2.40	12.00	2.15	12.00
BEANS, GREEN SNAP, fcy. c t				
Atl.	1.32-1.70	7.50- 8.00	1.40-1.50	7.50- 8.50
So.	1.45-1.60	8.00- 8.50	1.35-1.50	7.50- 8.00
Mid.	1.42-1.55	9.00- 9.75	1.30-1.55	9.00- 9.25
Wes. B. L.	1.77	9.75	1.75	9.75
BEANS, WAX SNAP, fcy. cut				
Atl.			2.20	11.75
Mid.	1.60	7.75- 9.25	1.40-1.60	7.75- 9.25
BEETS, fcy. sliced				
Atl.			1.10-1.20	6.20
Mid.	1.05-1.15	5.00- 5.50	.95-1.15	5.50
Wes.	1.27	6.30		
CARROTS, fcy. diced				
Atl.	1.00-1.15	5.75- 6.00	1.00-1.15	5.75- 6.00
Mid.	1.00-1.10	5.00- 5.50	.90-1.00	4.75- 5.00
Wes.	1.45	6.80		
CORN-GOLDEN, CREAM & KERNEL, fcy.				
Atl.	1.45-1.65	8.75- 9.50	1.40-1.65	8.75-10.00
Mid.	1.55-1.70	8.75- 9.25	1.50-1.70	8.75- 9.00
Wes.	1.72		1.65	9.00
CORN-WHITE, CREAM & KERNEL, fcy.				
Atl.				
OKRA, fcy.				
So. cut				
So. tomato				
PEAS, GREEN (No. 2 sieve), fcy. early, fcy. sweet				
Atl.	1.85		1.85	
Mid.	1.95-2.10	11.75-12.50	1.85-1.90	10.00-12.25
Atl.	1.35		1.25	7.25
Mid.	1.95-2.10	11.75-12.50	1.85-2.10	12.25
Wes.	2.35		1.95	9.25
PEAS, BLACKEYE (No. 300) fcy.				
So.	1.25	8.00	1.25	8.00
PIMIENTOS (4-oz. Glass & Tin) whole				
So.	1.65			
So. glass	1.85			
POTATOES, SWEET (No. 3-Vac.), fcy.				
Atl. syrup	2.30	10.00	2.30	9.75
So. syrup	2.65	9.50	2.65	9.50
Atl. vacuum				
So. vacuum				
POTATOES, WHITE, fcy.				
Atl.	1.00		1.00	6.25
So.	1.10-1.20	5.00- 6.50	1.25	6.50
Mid.				
Wes.				
PUMPKIN (No. 2½), fcy.				
Atl.	1.50-1.55	5.50- 5.75	1.50-1.55	5.50- 5.75
Mid.	1.55-1.60	5.50	1.55-1.57	5.50
Wes.	1.75	5.80		
SPINACH, fcy.				
Atl.	1.40-1.45	6.50- 6.80	1.40-1.50	6.50- 7.00
So.	1.20	5.50- 5.65	1.20	5.50- 5.65
Wes.	1.17-1.27	4.80- 5.30	1.25	5.00
OTHER GREENS, So. fcy.				
Turnip	.95-1.00	4.50- 4.95	.95	4.50
Mustard	.95-1.00	4.50- 4.95	.95	4.50
Poke			1.35	
SAUERKRAUT, fcy.				
Atl.	1.40-1.45	4.75- 4.95		4.75- 4.95
Mid.	1.12	5.25	1.12	5.25
Wes.	1.35	6.30		
TOMATOES, Ex. Std.				
Atl.	1.45-1.50	7.75- 8.75	1.45-1.50	7.75- 8.00
So.	1.15	6.00	1.10-1.25	6.75- 7.00
Mid.	1.35-1.55	7.75- 8.75	1.35-1.40	7.75- 8.75
Wes. fcy.	1.60-1.75	9.50	1.60-1.75	9.50
TOMATO CATSUP—TIN, fcy.				
Atl.		11.00		11.00-12.75
Mid.		9.25-10.00		9.50-10.00
Wes.		8.50- 9.00		8.50- 9.00
TOMATO PASTE (6-oz.) 26%				
Atl.				
Mid.		10.85		10.85
Wes.	.84- .86	9.50-10.00		9.50-10.00
TOMATO PUREE (No. 2½) fcy.				
Atl. (1.045)		7.00	2.00	7.00
Mid. (1.045)		6.00- 7.00		6.25- 7.00
Wes. (1.06)	2.10-2.50	6.00- 6.50		6.50
TOMATO SAUCE (8-oz.) fcy.				
Atl.				
Mid.				
Wes.	.76- .77	7.60		
MIXED VEGETABLES, fcy.				
Atl. peas-carrot	1.55		1.55	7.50
Mid. peas-carrot	1.60-1.70	9.25-10.00	1.55	
Wes. peas-carrot			1.75	10.00
Atl. succotash	1.95		1.85	
Mid. succotash				
Atl. other	1.55	8.00	1.40-1.55	8.00- 9.00

Mid. other .....
Wes. other .....

FROZEN VEGETABLES

(Retail per doz.)
(Insti. per lb.)
(Grade A)

	July 1, 1959 —Retail—		—Insti.—	
ASPARAGUS—JUMBO, 10-OZ., 40-OZ.				
Atl.		4.50	.45	-.48
Wes.		3.90		
BEANS, FDHK. LIMA—10-OZ., 40-OZ.				
Alt.	2.19	-2.40		.26
Wes.	1.85	-2.05	.19	-.19½
BEANS, BABY LIMA—10-OZ., 40-OZ.				
Atl.	1.90	-2.35		.20
Wes.	1.95	-2.00	.17½	-.21
BEANS, GREEN SNAP—REG. 9-OZ., 40-OZ.				
Atl.		1.95		
So.				
Wes.	1.60	-1.65		
BEANS, GREEN SNAP—FR. CUT 9-OZ., 40-OZ.				
Atl.		1.95		
So.				
Wes.		1.60		
BEANS, ITALIAN—9-OZ., 40-OZ.				
Atl.				
So.				
Wes.		2.10		.21½
BROCCOLI—10-OZ., 32-OZ. SPEARS				
Atl.	2.20	-2.33		.22
So.				
Wes.	1.55	-1.85	.17½	-.20
BRUSSELS SPRTS.—10-OZ., 32-OZ.				
Wes.		2.35		.25
CARROTS—50#				
Atl.				
Wes.				.06
CAULIFLOWER—10-OZ., 32-OZ.				
Atl.	2.25	-2.35		.22
Wes.	1.80	-1.85	.17½	-.20
CORN, CUT—10 OZ., 40-OZ.				
Atl.	1.75	-1.79		.20½
Mid.				
Wes.	1.50	-1.55	.19	-.20½
CORN, COB—2-EAR, 12-EAR				
Mid.				
Wes.		1.75		
KALE—10-OZ., 32-OZ.				
So.				
MIXED VEGETABLES—10-OZ., 40-OZ.				
Atl.	1.75	-1.93		.18
Mid.				
Wes.	1.50	-1.65	.17	-.18
OKRA—10-OZ., 40-OZ.				
So.				
PEAS, BLACKEYE—10-OZ.				
So.				
PEAS, GREEN—10-OZ., 40-OZ.				
Atl.	1.60	-1.69		.17½
So.				
Mid.	1.32½	-1.40	.15½	-.16½
Wes.	1.35	-1.79	.15	-.17
PEAS & CARROTS—10-OZ., 40-OZ.				
Mid.				
Wes.	1.30	-1.35	.14	-.15
POTATOES—9-OZ., 40-OZ.				
Atl. Fr. Fr.	1.55	-1.69		.19
Atl. whipped				
Atl. shredded				
Atl. puffs				
Wes. Fr. Fr.		1.40		
Wes. whipped				
Wes. shredded				.07
Wes. puffs				
PUMPKIN & SQUASH—12-OZ., 4-LB.				
Atl.		1.63	.09	-.12
Wes.		1.20	.08	-.09½
RHUBARB—10-OZ., 30#				
Wes.				
SPINACH—10-OZ., 48-OZ.				
So. leaf				
Wes. leaf	1.20	-1.35	.09½	-.11
So. chop				
Wes. chop	1.15	-1.35	.08½	-.09½
OTHER GREENS—10-OZ., 48-OZ.				
Mustard, So.				
Turnip, So.				
SUCCOTASH—10-OZ., 40-OZ.				
Atl.	1.85	-2.15		.20
Mid.				
Wes.	1.65	-1.85	.18	-.21½

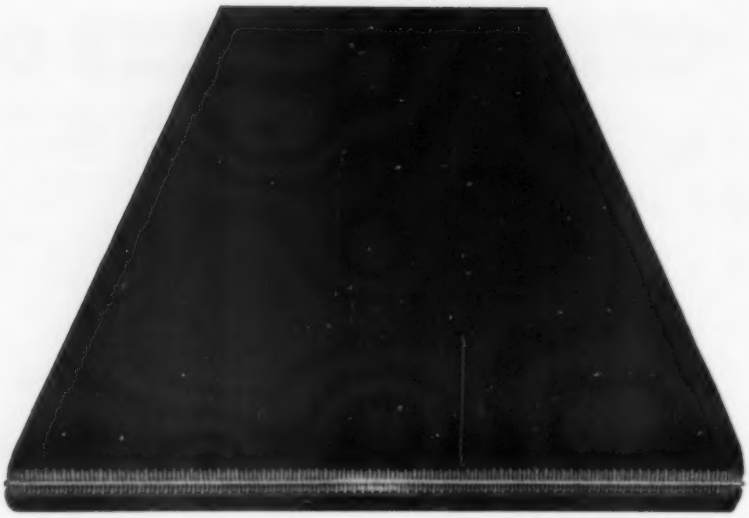
FROZEN FRUITS

	July 1, 1959 —Retail—		—Insti.—	
APPLES (30# SLICED)				
Atl.				
So.				
Mid.				
Wes.				.12½
APRICOTS (30# HALVED)				
Wes.				
CHERRIES, RED (30# PITTED)				
Atl.				.14
Mid.				
Wes.				.15½
CHERRIES, SWEET (30#)				
Wes.				.28
GRAPES AND PULP (BBLS.)				
Atl.				
So.				
Mid.				
PEACHES, FREESTONE (12-OZ., 30# SLICED)				
Atl.		2.58		
So.				
Mid.				
Wes.		2.05	.10¼	-.15½
PRUNES (30#)				
Wes.				
BLACKBERRIES (#30)				
Wes.				
BLUEBERRIES (30#)				
Atl.		3.29		
Mid.				
BOYSENBERRIES (30#)				
Wes.			.12¾	-.16
CURRANTS (BBLS.)				
Atl.				
Mid.				
LOGANBERRIES (30#)				
Wes.				
RASPBERRIES, BLACK (30#)				
Atl.				
Mid.				
Wes.				
RASPBERRIES, RED (10-OZ., 30#)				
Atl.	2.29	-2.90		
Mid.				
Wes.	2.00	-2.25		.22½
STRAWBERRIES (10-OZ. SL., 30# WHL.)				
Atl.	2.29	-2.46		
So.				
Mid.				
Wes.	2.10	-3.10	.18½	-.22½
MIXED FRUITS (12-OZ.)				
Wes.		2.75		

FROZEN JUICES

(Retail per doz. 6-oz.)
(Insti. per doz. 32-oz.)

	July 1, 1959 —Retail—		—Insti.—
GRAPEFRUIT			
So.	1.25	-1.62	6.50
LEMON			
Wes.		.88	
LEMONADE			
So.		1.06	
Wes.		.87	
LEMONADE, PINK			
Wes.		.88	
LIMEADE			
So.	1.00	-1.22	6.00
Wes.			
ORANGE			
So.	2.00	-2.37	10.25
Wes.	2.10	-2.37	
ORANGE—GRAPEFRUIT			
So.	1.62½	-1.98	
TANGERINE			
So.	1.75	-2.03	
GRAPE			
Atl.		1.50	
TROPIC PUNCH			
So.	1.62½	-1.63	
Wes.		1.50	6.00



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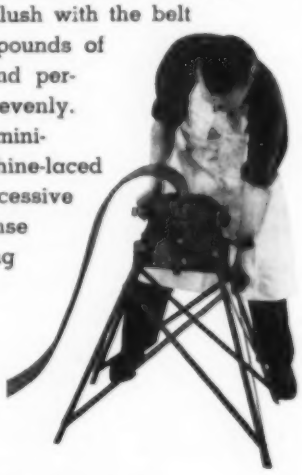
HOOKS and LACERS

Even on small-diameter rollers like the one shown above, Clipper machine-laced joints are smooth and flexible and give longer life. Hooks are firmly imbedded flush with the belt surfaces and clinched by up to 45,000 pounds of pressure. Double-staggered gripping and perfectly rounded loops distribute strain evenly. Wear on hooks, belts and machinery is minimized by smoothness of the Clipper machine-laced joint. There is no pounding to cause excessive wear. Save maintenance time and expense and cut unproductive downtime by using Clipper hooks and lacers.



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Clipper BELT LACER COMPANY

994 Front Ave., N. W., Grand Rapids 2, Michigan

CANNED FOODS

Fruit, Meat, Poultry Packs Show Gains

Fruits: Excluding grapes and citrus, the U. S. crop of fruits used for processing appears to be close to 7,400,000 short tons in 1959, about 11% greater than the harvests of the same varieties in 1958. Olives are the only fruit so far showing a sharp reduction in yield. Stocks of a dozen major canned fruit items, at the carryover date of June 1, 1959, were 13% below the comparable figures on June 1, 1958, suggesting a total supply for 1959-60 about on a par with last season.

Vegetables: Acreage of eight principal processing vegetables, for canning and freezing, is reduced about 3% in 1959 in the United States, compared with 1958. Peas and tomatoes are considerably smaller, corn is up about 12%. There are minor adjustments upward in the acreage of green lima and snap beans and winter-spring spinach, and downward in beets and contract cabbage-for-kraut. With stocks running at about the same overall level as a year ago, total 1959-60 canned vegetable supplies are expected to be about on a par with 1958-59.

Poultry: Chicken, turkey and other poultry packed under USDA inspection in the first four months of 1959 again showed an increase over the like period of 1958, as did those four months over the first third of 1957. Inspected poundage for the first four months has been as follows in the last three seasons: 90 millions in 1959, 83 millions in 1958, and 68 millions in 1957.

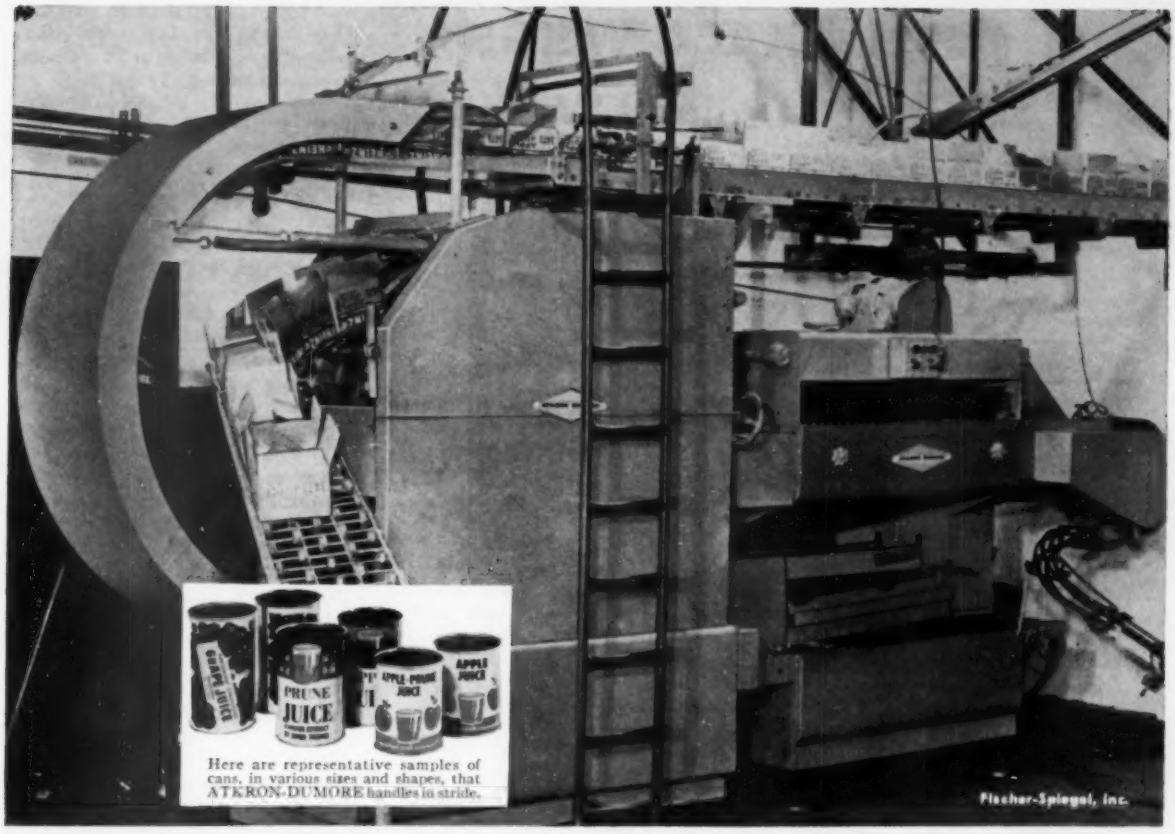
Meat: Meat products canned under USDA inspection (except soups) amounted to 762 million lbs. in the first five months of 1959, against 709 millions in the like period of 1958.

Soups: U. S. production of canned soups containing meat, and packed under USDA inspection, totaled 283 million lbs. in the first five months of 1959. This compares with 239 million lbs. in the same period last season, and 516 millions for the full year of 1958.

1958-59 Packs: U. S. canned food packs started in the summer or fall of 1958, and completed in the spring of 1959, are reported as follows with comparable 1957-58 data, in thousands of cases:

Item/cases	1957-58	1958-59
Apples, 6/10s	3,668	3,639
Applesauce, actual	14,006	16,003
Pineapple, actual*	18,557	19,483
Pineapple juice, actual*	11,249	13,465
Grapefruit, 24/2s†	4,170	4,572
Cit. salad, orange, 24/2s†	476	391
Tangerine juice, 24/2s†	303	772

*Hawaii-Philippines, per Pineapple Growers Assn. of Hawaii. †Florida only, per Florida Canners Assn.


PRUNE JUICE
APPLE JUICE
Here are representative samples of cans, in various sizes and shapes, that ATKRON-DUMORE handles in stride.
Fischer-Spiegel, Inc.

Food Processor Cuts Costs with Atkron-Dumore Can Sorter-Uncaser!

Fischer-Spiegel, Inc., of Geneva, Ohio, private brand processors and packers of fruit concentrates and juices for many of the world's largest companies, enjoys an annual production in excess of two million cases. Since it began operations in 1946, with a plant area of 1,800 square feet, the company has increased its operations to 60,000 square feet.

To build this volume of business, Fischer-Spiegel obviously had to be on its toes . . . constantly seeking ways to increase production and successfully combat rising costs.

Fischer-Spiegel took one major step in this direction, by installing the ATKRON-DUMORE CUS 4.5 Can Sorter-Uncaser. With this unit, a two-man team *now* does twice the work that had required seven! One man picks up skids of cans in the warehouse and loads them on the Infeed Conveyor . . . the second man supervises the operation of the Can Sorter-Uncaser. This same two-man team has time to handle all changeovers of the unit.

The ATKRON-DUMORE Can Sorter-Uncaser also saves Fischer-Spiegel time and money, by making it possible to handle cans in various sizes with only minutes required for changeovers.

The ATKRON-DUMORE Can Sorter-Uncaser is *more than paying for itself!* Continuous motion eliminates costly stoppages, space requirements are minimized, lithographed cans are protected, and open end cans guarded against damage. *In addition, the ATKRON-DUMORE Can Sorter-Uncaser can handle reshipper cartons, shipper trays, bags or bulk . . . with amazing efficiency!*

Profit from the experience of Fischer-Spiegel. Write for information on other Atkron-Dumore equipment including: Flap Openers, Case Packers, Case Cleaners, Full and Half Depth Uncasers. *This can easily make the difference between profit and loss in your plant.*

ATKRON DUMORE

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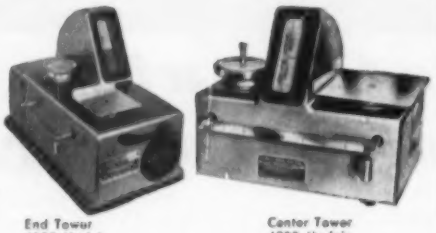

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BETTER QUALITY CONTROL . . . BETTER COST CONTROL

Incomplete packs, through June 20, are reported by Florida Canners Assn. as follows, in thousands of 24/2s, with last season totals to the same date:

Item	1957-58	1958-59
Grapefruit juice	9,486	10,006
Orange juice	17,863	13,242
Grapefruit/orange juice	4,872	4,209

DRY FOODS

Fruits and Nuts Show Gains

Dried Fruits: U. S. 1959 production of dried fruits is somewhat larger than that of 1958. Good-sized harvests of apricots, peaches and pears point to a moderate increase in the relatively-small cut fruit packs. The raisin grape outlook is promising at this writing and, barring another disastrous rain such as was experienced last season, both quantity and quality should be up in 1959. California's prune crop is estimated by USDA at 150,000 dry tons, 56% larger than that of 1958. Washington-Oregon also are expected to produce more dried prunes this season.

Nuts: The California walnut crop is smaller than that of 1958, and a slightly larger yield in the Pacific Northwest is not enough to make up the difference. On the other hand, the California almond harvest may set a new record for size, and certainly will total much more than the 20,000 tons of 1958. The Northwest filbert crop promises to be bigger than that of last season, and the outlook for pecans in the South is promising.

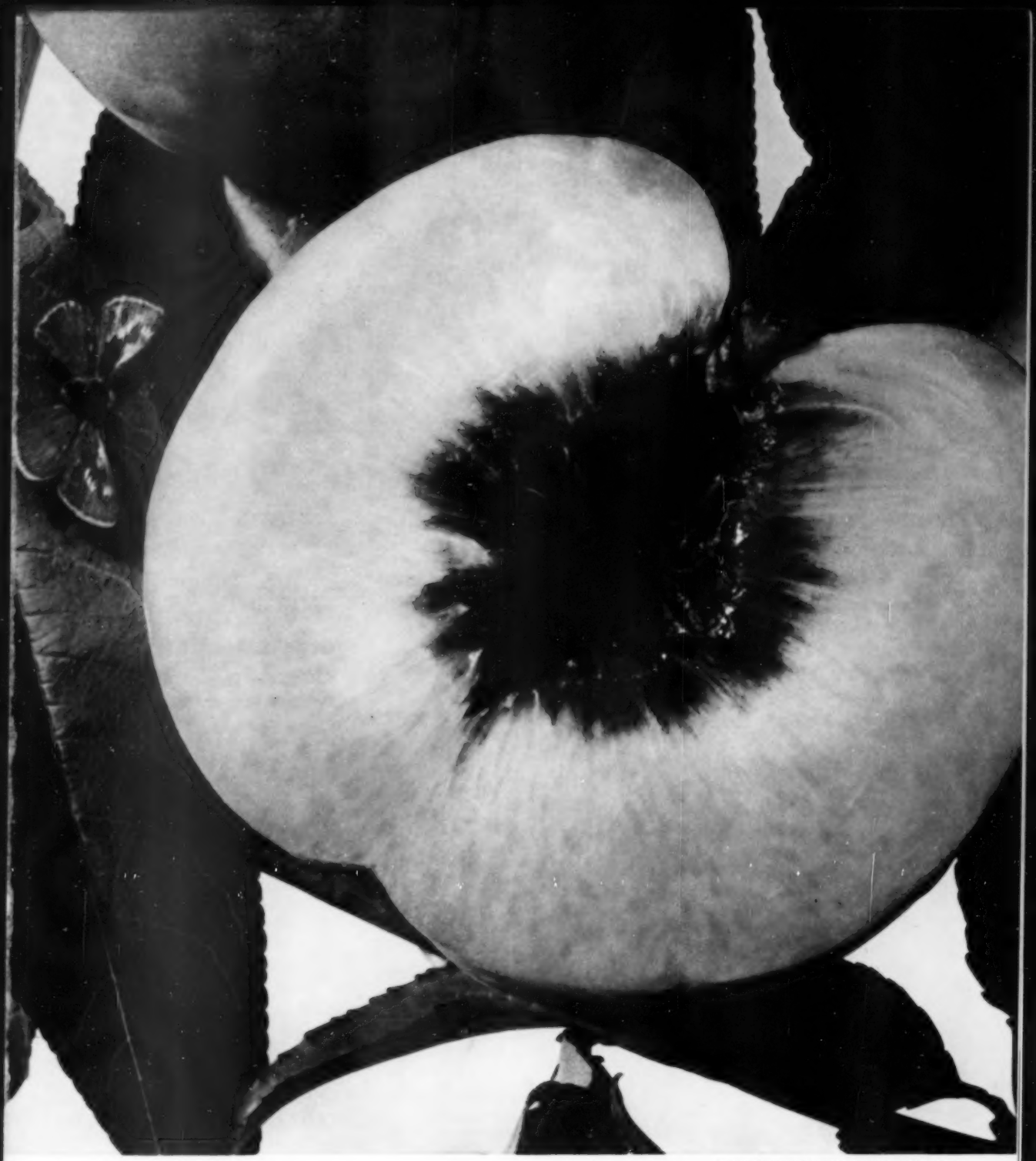
Overseas, the Mediterranean Basin almond crop is estimated by USDA at 105,500 shelled tons, compared with 57,500 tons the year before. The Brazil nut harvest, however, is now expected to run no more than 23,000 short tons, unshelled, against 43,500 in 1958. Production of Indian cashew nuts (including 4,000 tons in Portuguese Coa) is estimated at 71,000 short tons, contrasted with 77,000 tons each in 1957 and 1958.

FROZEN FOODS

Berry Crops Small—Eggs and Citrus Packs Go Up

Berries: With a U. S. strawberry harvest of only 440 million lbs. (nearly 100 millions short of 1958), the nation's 1959 frozen strawberry pack will be well short of last year's 262 million lbs. Also lagging are packs of boysens, red and black rasps, and blackberries—pointing to a small overall 1959 frozen berry outturn. With frozen berry stocks also lower than last year, the supply for 1959-60 will be seriously short.

Fruits: A somewhat larger pack of fruits other than berries is expected



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Fastest, easiest operation ever. Upfront horizontal prism loads or wipes in a wink. You can actually complete several tests a minute!

Lowest-cost Abbe. You pay only $745 for Abbe-3L . . . less than 29¢ per working day for the first ten years of its long trouble-free life.

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BAUSCH & LOMB
SINCE 1853

by the U. S. frozen food industry in 1959. Crops of apricots, red cherries, plums and prunes are larger this year, and the shortage of berries tends to increase interest in the cut fruits.

Vegetables: The U. S. frozen pea pack is likely to be a little smaller in 1959 than in 1958. Acreage of corn for freezing, however, is up 11%, and that of green and wax snap beans is 14% above 1958. Total processing acreage of green lima beans, and of winter and spring spinach, is also slightly above last year. Total frozen pack for the year, therefore, should be slightly larger than the 1958 figure.

Eggs: U. S. output of frozen eggs totaled 255 million lbs. in the first five months of 1959, up considerably from the 196 million lbs. of the same period in 1958.

Citrus: Florida Canners Assn. reports that state's frozen citrus concentrate output as follows, as the season draws to the end (thousands of gallons):

Item	1957-58	1958-59
Orange	57,185	79,555
Grapefruit	3,328	4,908
Grapefruit/orange	506	675
Tangerine	146	1,142

GLASSED FOODS

Container Shipments Point to Larger Packs

Containers: Manufacturers shipments of narrowneck food containers in the first five months of 1959 were 5,938,000 gross, contrasted with 5,065,000 gross in the same part of 1958. Widemouth food containers also showed a gain, from 15,709,000 gross in five months of 1958 to 16,455,000 gross this season.

Honey: Except for rains in the Southeast during the spring and early summer, the outlook is for a generally good honey pack in the United States in 1959. Total production is expected to be about on a par with the 266 million lbs. packed in 1958.

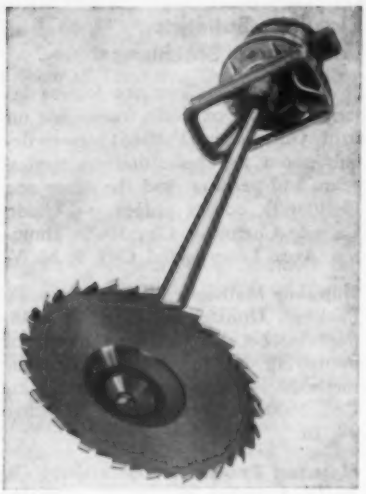
Peanut Butter: Shelled peanuts used for butter (except directly for sandwiches) have added up to 309,927,000 lbs. in the United States in the first 10 months of the season starting Aug. 1, 1958. This is well ahead of the 299,803,000 lbs. recorded to June 1, 1958.

Pickles: The U. S. planted acreage of cucumbers for pickles is estimated at 111,590 acres in 1959, 12% smaller than that of 1958, and 22% below the 1948-57 average.

Salad Dressings: Production of food fats in the United States in the first half of the marketing year starting Oct. 1, 1958, was up 11% over the same period of 1957-58, indicating gains in the production of shortening, margarine, cooking and salad oils, and salad dressings.

NEW EQUIPMENT/SUPPLIES

DESCRIPTION: New impeller design for various models of the Cowles Dissolver, for use on french dressings, applesauce and fruit pectins for jams and jellies.



FEATURES: The impeller is designed to overcome the problems of heated tank methods of dissolving pectin. Batches are free of pectin agglomerates. Pigment concentrations are produced easily. Hard spots are eliminated in applesauce.

MFG.: Morehouse - Cowles, Inc., 1150 San Fernando Road, Los Angeles 65, Calif.

Automatic Case Cleaner

DESCRIPTION: Machine cleans case with mechanical vibration and air pressure, designed principally for the beverage industry.

FEATURES: Cases are held onto conveyor by flaps, move automatically through machine at a rate of 36 cases per minute. An attachment can be added to spray interior of each case with an insecticide.

MFR.: Radio Corp. of America, 30 Rockefeller Plaza, New York 20, N. Y.

Moisture Meter

DESCRIPTION: Transistor meter is lightweight and powered by inexpensive flashlight batteries. It determines available soil moisture. Trade name: BN-2 Bouyoucos Moisture Meter.

FEATURES: It is simple to use and easy to read. According to the manufacturer, a grower can realize greater profits by using the meter because there would be an elimination of unnecessary irrigation.

MFR.: Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, Essex County, N. J.

Polyethylene Packager

DESCRIPTION: This machine will form, fill and seal unsupported polyethylene films. Trade name: New General Poly Packager.

Put 'em on your production line—

THE All-New Scott VIBRO-LUX SEPARATING UNIT

FA-3500

Variable speed from 900 to 1000 vibrations per minute! Removes water, most splits and skins, and spreads commodity evenly over the screen (ideal for use ahead of inspection table). Hickory slats absorb vibration . . . no carry-through to floor! Feed height 22", discharge height 16½". Longer legs available.

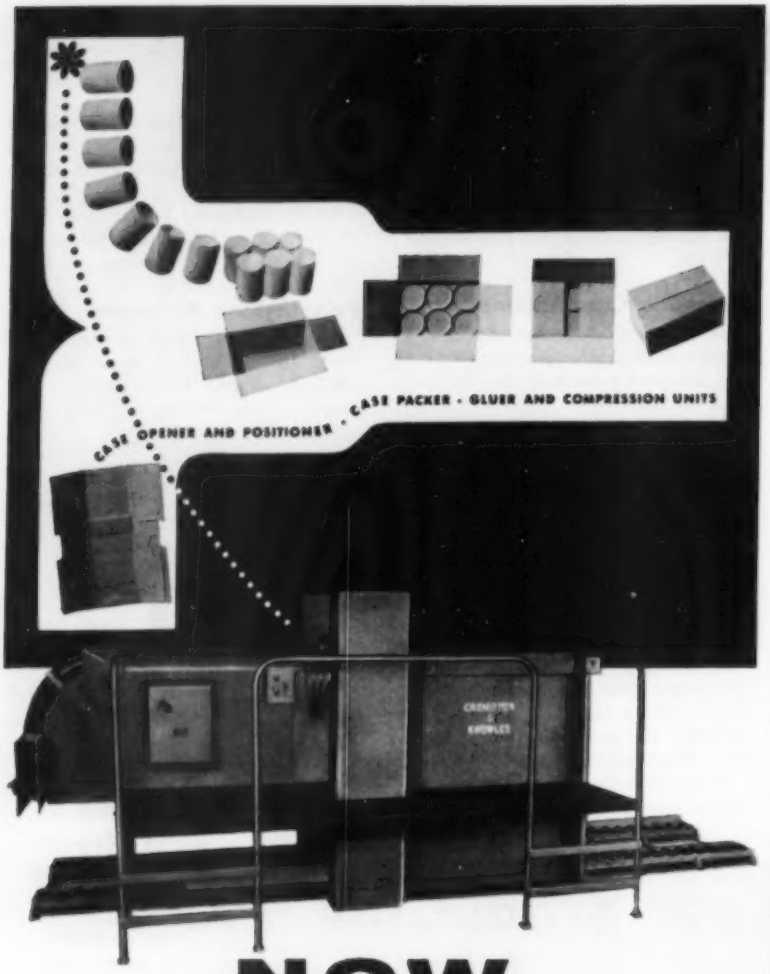
REMEMBER — The Scott Viner Company will go out of its way to give you service your way!

THE SCOTT VINER HYDRAULIC ELEVATOR

Handles any commodity that can be elevated and conveyed in water. Accurate control of water level, feed hopper only 20½" off the floor, at the pre-mixing chamber for easy loading from low discharge units . . . Motor is high and dry and fully protected from steam and water. Choice of 3", 4", 5" and 6" pumps. Variable speed drive, stainless hopper and/or contact parts optional.

Write today for complete information and specifications on these two production-pacing units.

THE Scott Viner COMPANY 1224 KINNEAR ROAD, COLUMBUS 8, OHIO



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The C & K Depalletizer

An Important New Addition to the C & K Automatic Can Handling Line

Yes, now C & K Packaging, the fastest growing name in automatic packaging, can offer you the finest performing empty can depalletizer on the market.

This rugged, quality-manufactured new addition means that now, more than ever, C & K is your number one source for complete automatic can handling and case handling lines. The new field-tested depalletizer is engineered to meet problems previously unsolved by competitive equipment. It, like the rest of the C & K line — case openers and positioners, case packers, gluers and sealers, is built for long, dependable, trouble-free life.

For complete details on the new C & K depalletizer — designed to handle cans of any diameter and from 2⅛" to 7" high with a left hand, right hand or left and right hand discharge — write today. And remember, with C & K equipment, complete servicing is as near as your telephone.

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Sales Representatives:
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FEATURES: This single tube machine has a stainless steel tubeless folder that will handle a wide variety of products and bag sizes. Package size range covers bags up to 9 inches wide and 13 inches long.

MFR.: General Packaging Equipment Co., 6100 Westview Drive, Houston 24, Texas.

Circulars, Bulletins Catalogues, Brochures

Sevin Insecticide: Two new folders describe the use of Sevin insecticide on fruit. One folder (F-40461) gives details about its application on apples, pears and peaches, and the other one (F-40460) covers grapes — Union Carbide Chemicals Co., 30-20 Thomson Ave., Long Island City 1, N. Y.

Shipping Methods: "Better Ways To Package, Unitize and Ship" is a 48-page pocket booklet with ideas for improving packaging and shipping methods — Signode Steel Strapping Co., 2600 N. Western Ave., Chicago 47, Ill.

Metering Emulsifiers: Data sheet (B-59-1) describes continuous metering of emulsifiers and antioxidants to dry mashed potato flakes — Milton Roy Co., 1300 E. Mermaid Lane, Philadelphia 18, Pa.

Processed Food Equipment: A new 34 page catalog describing tubing, fittings, valves, pumps, tanks, processors, heat exchangers, heaters, conveyors, homogenizers, centrifuges, fillers, strainers, miscellaneous equipment—Cherry Burrell Corp., 2400 Sixth St., S. W., Cedar Rapids, Ia.

Concrete Floors: Long-wear quality of Masterplate concrete floors is discussed in detail, complete with photos and diagrams in bulletin MP-4d—Master Builders Co., Cleveland 3, Ohio.

Weight Data Transmission: 8-page brochure (Form 2975a) discusses the latest remote weighing advances. Several systems are described and illustrated—Toledo Scale, Div. of Toledo Scale Corp., Toledo 12, Ohio.

Bottom-up Case Filler: A ten-minute color film shows the operation of the company's new case packer in the distillery of Joseph E. Seagram and Sons in Louisville, Ky.—W. F. and John Barnes Co., 301 S. Water St., Rockford, Ill.

Stainless Steel Fittings: Bulletin describes new "Pipe-Mate" light-wall stainless steel fittings and flanges for non-critical process piping — Tube Turns Div. of Chemetron Corp., Louisville 1, Ky.

Model Handling Code for Frozen Foods Approved by F&D Officials

The long awaited Frozen Food Handling Code, under preparation for three years, was unanimously adopted by the delegates of AFDOUS (Association of Food and Drug Officials of the U. S.) June 24, 1959, at the annual convention in Boston, Mass.

The code, prepared with the help of Natl. Assn. of Frozen Food Packers, is a suggested set of regulations whereby states desiring to establish controls can do so. The document offers a practical and reasonable method for the proper handling of frozen foods. The delegates were urged by their association, however, to use caution and restraint in adopting it for immediate use since much equipment would not meet the suggested standards at the present time.

Three years ago, AFDOUS requested help of NAFFP in designing a model set of regulations which would allow the consumer to purchase frozen foods with all of their "built-in" quality. Working together, the two associations drafted the adopted code which specifies that zero degrees Fahrenheit is the maximum temperature to which frozen foods should be subjected during transportation, storage, and retailing. Tests conducted by NAFFP and others indicate that frozen foods maintain their high quality at this temperature, but show a variable degree of quality loss as temperatures exceed zero degrees Fahrenheit.

Although the approval of this AFDOUS code does not make it law, many states will use it as a guide in adopting their own sets of regulations. The results should mean that frozen foods will maintain uniformly high quality wherever sold when and if regulations are eventually adopted by the states.

Methyl Bromide Considered for Approval for Dried Fruits

A worrisome development for the dried fruit industry is passage last September of Public Law 929, known as the Food Additives amendment to the Federal Food, Drug & Cosmetic Act.

On the one hand, there is increasing insistance that a satisfactory degree of freedom from insects be maintained. This means using insecticides, which in this industry means fumigants. On the other hand, restrictions on such materials are either in force or are under consideration. No residues in deleterious amounts will be permitted, it is certain, so the question to be answered is: will methyl bromide leave too much bromide in dried fruits?

This question of fumigant residues in dried fruits received attention as early as 1938. The conclusion reported was: "It seems unlikely that the small amount of methyl bromide or bromide residues on commercially fumigated . . dried fruits is harmful to the consumer." This conclusion was based on extensive tests with laboratory animals.

Before the additives bill was passed, the Miller bill had already alerted the industry to a realization that . . residue tolerances . . were only a matter of time. Dried Fruit Assn. of California

Cook-Chex takes the last trace of guesswork out of production control.

1. Eliminate wrong cook schedules.
2. Keep retort baskets in sequence.
3. Guard against "by-passing" retorts.
4. Provide low-cost permanent records for your cooking-plant.

Cook-Chex is the chemically impregnated retort tag that changes from purple to green *only* after your run has been properly and completely retort processed. Hang a Cook-Chex on each basket before retorting—inspect it after withdrawing. You have the full "protection" record at a glance. It's that easy—that sure.

Used by *all* major packers. Approved and recommended by cannery inspectors. Ask *them!*

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Please have your trained representative call on us to discuss our production problems.

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Address.....

City..... State.....

Let **Cyclone** carry your production load

Competitive market prices make production efficiency a more vital part of business success than ever before. Production waste, unnecessary manual handling, or time-consuming carting of products can add unnecessary expense to the price of your product. In many cases, a Cyclone Metal Processing Belt could help make your production line more efficient, thus making your product price more competitive.

We'd like the chance to send one of our trained salesmen into your plant to investigate your own production problems. Chances are he can show you, with facts and figures, exactly how a Cyclone Belt can be a blessing to your profit picture. His suggestions will be tailored to YOUR plant and YOUR product, not just a general sales pitch. There is absolutely *no obligation.*

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American Steel & Wire
Division of
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and U.S. Dept. of Agriculture, in cooperation with Dow Chemical Co., set up a program of methyl bromide fumigants to build up a reserve of information. The tests were multiple fumigations, some of them exposing dried fruits to conditions seldom if ever occurring in commercial insect control.

One series of analyses of Thompson seedless raisins showed bromide present, after fumigation, in amounts of 10 to 25 ppm. However, unfumigated check lots contained from 10 to 17 ppm. Another stack, fumigated 12 times, showed a bromide range of 6 to 16 ppm., while unfumigated checks ranged from 7 to 22 ppm. A third experiment was carried out under more severe conditions of exposure, 11 varieties of dried fruits being fumigated 13 times in an experimental chamber tighter than most commercial fumigation enclosures. After eight fumigations, Tilton apricots had 52 ppm. and Royals 47, but all other fruits were 30 or less. After 12 to 13 exposures, bromine was higher, but with only three exceptions all levels were below 100 ppm.

This information, considered in connection with the present tolerance for almonds and walnuts of 200 ppm. following post-harvest fumigation, gives us reason to hope that use of methyl bromide as a dried fruit fumigant will be allowed to continue. The final decision, however, is up to the Food & Drug Administration.

—From paper by Garth H. Spitler, U.S. Dept. of Agriculture, Fresno, Calif., at Dried Fruit Assn. convention, April, 1959.

Grade Standards

Grade standards developed by the U. S. Department of Agriculture are voluntary. Comments regarding standards and requests for copies of standards may be sent to and obtained from: Chief, Processed Products Standardization and Inspection Branch, Fruit and Vegetable Div., Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.

Proposed Changes to Standards for:

Canned Blueberries
Sweet Potatoes for Freezing
Frozen Field and Black-Eye Peas

New Grade Standards for:

Concentrated Lemon Juice for Manufacturing

Standards of Identity

The Food and Drug Administration establishes standards which are binding to every processor. Comments on proposed changes may be sent in quintuplicate to: Hearing Clerk, Department of Health, Room 5440, Health, Education and Welfare Building, 330 Independence Ave., S. W., Washington 25, D. C.

Proposed Standards for:

Peanut Butter

Men in the News

Professor Paul Buck, associate professor in the Department of Dairy & Food Industries at the University of Wisconsin, has accepted a position at Cornell University as head of the Food Technology Program.

J. Kenneth Kirk, presently head of the Food and Drug Administration's Boston district, was named to the newly formed position of assistant to the Commissioner for regulations making.

Dr. Edward Ross, professor of horticulture at Washington State College, Pullman, Wash., was named to head the new Department of Food Processing & Utilization at University of Hawaii, Honolulu. Hawaii's former Food Processing Laboratory, where Dr. Ross spent a year in 1956-57, has been taken into the university by action of the last legislature, and will house the new department.

Worried?
About Rising Labor Costs...
...Hiring Able Help For Short Seasonal Periods?

Your Answer Is: MODERNIZE and You'll ECONOMIZE

Many Packers have long overlooked the necessity for improving and modernizing their equipment for hulling green peas and lima beans. Profit-conscious operators find that labor and other costs may be substantially reduced while stepping up capacity and efficiency by adding "KEY" Vine Feed Regulators and Hoists, improved viner feeders and conveyors.

No better time than NOW to check what you need for putting these operations on a more efficient and profitable basis. Write for latest illustrated literature.

Key Vine Feed Regulator and Hoist

Frank HAMACHEK MACHINE COMPANY

Established 1880 Kewanee, Wisconsin

PEA AND BEAN HULLING SPECIALISTS

SUPPLIERS NEWS

Companies & Plants

Chas. Pfizer & Co., Inc., New York City, is building a 32-story World Headquarters Building, scheduled for completion in the spring of 1961.

Miles Laboratories, Elkhart, Ind., announced the formation of a new firm named the Miles Chemical Co. which will be a main division of the parent corporation. The new company is a consolidation of Summer Chemical Co., Zeeland, Mich.; Takamine Laboratory div., Clifton, N. J.; and Citric Acid production, Elkhart.

Continental Can Co. recently merged with Fort Wayne Corrugated Paper Co., then sold three of Fort Wayne's four corrugated box plants. Continental Can will operate the fourth plant which is located in Chicago, thereby extending its service to Illinois, Wisconsin and Iowa.

Monsanto Chemical Co., St. Louis, Mo., has completed the expansion of silica production facilities at its Everett, Mass. plant.

Continental Can Co. announced the opening of folding carton sales offices in Leonia (N. J.), Needham (Mass.) and Pittsburgh by the Boxboard and Folding Carton Div.

Chain Belt Co., Milwaukee, Wis., has organized three overseas corporations. They are Rex-Chabelco A. G. in Switzerland, Rex-Regina S. A. in Italy and Chain Belt (Japan) Ltd. Products made by the subsidiaries will be marketed in Europe.

Ciliotta Labeling and **Capping Equipment Co.** has opened offices at 92 Liberty St., New York City.

American Can Company has formally opened its multi-million-dollar pulp and paper mill in Naheola, Ala. The mill is operated by Marathon Southern Corp., a Canco subsidiary and an operating unit of the firm's Marathon Division.

Vanton Pump Division of **Cooper Alloy Corp.,** Hillside, N. J., has formed a new design service department to help small pump users solve fluid-handling and pump problems.

National Starch and Chemical Corp., New York City, has purchased Polimeros S. A., a manufacturer of vinyl acetate polymers, located in Mexico City. Donald E. Reese, founder of Polimeros, will continue as president of the firm which will operate as a wholly owned subsidiary.

Great Western Sugar Co. recently held an open house at their new Chicago Bulk Dry & Liquid Sugar Terminal in Brookfield, Ill.

Directors of the **Diamond Gardner Corp.,** New York City, and **U.S. Printing & Lithograph Co.,** Cincinnati, Ohio, have agreed to merge the two companies, subject to shareholders' approval.

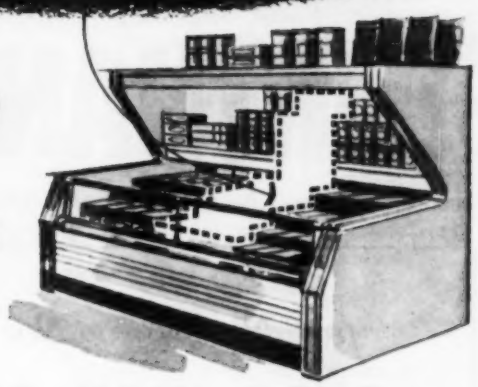
Dow Chemical Co., Midland, Mich., has purchased a vacant industrial plant in Findlay, Ohio, which will be used for the manufacture of polyethylene film. Manager of the plant will be Robert W. VanSickle.

Pacific Intermountain Express, an interstate motor freight common carrier, announced the transfer of midwest region offices from Kansas City, Mo., to Omaha, Neb.

The Container Machinery Div., **E. W. Bliss Co.,** Canton, Ohio, will supply and install all can making

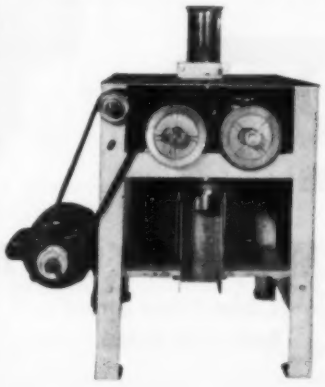
WILL YOUR PROFITS BE FROZEN

while sales of your product grow?



Outmoded equipment that can't keep pace *economically* with increasing demands will be a serious handicap to profits this year . . . and in the booming sixties ahead.

Modern Robins equipment can help you beat the squeeze on profits by speeding production, reducing waste, cutting labor costs. Robins can help you with one machine . . . or a complete production line. Start unfreezing your profits today by writing for FREE ROBINS CATALOG . . . or by checking the newest in processing machinery with your Robins representative.



AN EXAMPLE . . .

Robins Fre-Bar Pickle Slicer is quickly, easily adjusted to take any size cucumber . . . completely eliminates cost of product grading.

A.K.Robins AND COMPANY, INC.

Manufacturers of Food Processing Equipment Since 1855

713-729 E. Lombard Street, Baltimore 2, Md.

Protect your cole crops from now 'til harvest by spraying or dusting with PERTHANE. This chlorinated insecticide does a good job of controlling late season worm flare-ups. Certain phosphate insecticides may be combined with PERTHANE for quicker kill and control of aphids.

Low toxicity to warm blood animals and high residue tolerance make PERTHANE extra-safe to use. PERTHANE can be applied right up to within three days of harvest if necessary.

Spray with PERTHANE EC emulsion concentrate, or apply in dust formulations alone or mixed with appropriate fungicides and insecticides.

Ask your dealer for a descriptive folder on late season use of PERTHANE for cole crops.

PROTECT COLE CROPS

from late season insect raids

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PERTHANE

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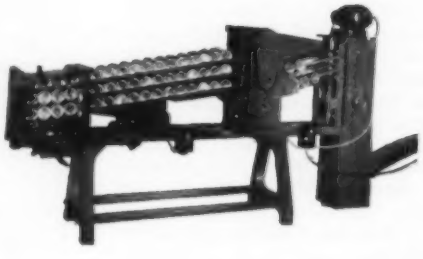
from New Jersey to New Zealand . . . . . packers save time with

BURT HIGH SPEED CASE PACKERS

Around the world, Burt Packers are speeding up production lines. They pack 2 layers with a single stroke!



BURT

BURT MACHINE COMPANY

401 East Oliver Street

Baltimore 2, Md.

equipment, auxiliary equipment and machine shop and maintenance equipment for a new can manufacturing plant now being built in the Philippine Islands by the Standard Investment Corp. of Manila.

Men in the News

W. W. Jackson, president of Hoerner Boxes, Inc., Keokuk, Ia., has retired for reasons of health and to devote his time to other interests. He will continue to serve as a member of the board of directors. Mr. Hoerner, board chairman, will assume Mr. Jackson's responsibilities as president.

O. H. Engebretson was appointed Eastern regional sales manager for frozen food packaging sales of Marathon, Menasha, Wis.

H. W. Fritt

J. C. Hawes

Harry W. Fritts was appointed manager of the packaging section, Sales Development Div., Aluminum Company of America, Pittsburgh, Pa.

John C. Hawes was appointed manager-marketing, advertising and promotion for Brockway Glass Co.

George E. Myers, although retiring from his position of vice president and treasurer of Ball Brothers Co., Inc., Muncie, Ind., will continue as a member of the board and executive committee, and as chairman of the finance committee and director of two Ball subsidiaries. **Howard H. Ward** succeeds Mr. Myers as treasurer of the firm.

William D. Wallace and **Lowell H. Smith** were elected vice presidents of Crown Cork & Seal Co., Inc. Mr. Wallace will be director of operations and Mr. Smith will continue as general manager of Crown's Machinery Div. Morton M. Dukehart was named manager of packers—beer—beverage can sales. He will headquarter at the firm's general offices in Philadelphia, Pa.

C. W. Carrington, advertising director of Morton Salt Co., has been elected marketing vice president.

Frank S. Bonham was appointed technical director of Fome-Cor Corp., Springfield, Mass. Fome-Cor was formed early this year by St. Regis Paper Co. and Monsanto Chemical Co. to manufacture and market Fome-Cor, a new lightweight panel consisting of a foamed plastic core and kraft paper skins.

W. M. Brown

A. T. Stafford

William M. Brown was appointed sales manager of multiple packaging at the Boxboard and Folding Carton Div., Continental Can Co. He replaces W. J. Hamilton who resigned.

Arthur T. Stafford was named divisional vice president for marketing of the Packaging Div., Olin Mathieson Chemical Corp., New York City. He succeeds Walker Hamilton who will continue as a consultant.

Edward J. Klein was named regional industrial manager with headquarters in Philadelphia, Pa., Minneapolis - Honeywell Regulator Co. **John J. Horner** succeeds Mr. Klein as industrial manager of the Philadelphia office; and **Carl F. Boehnlein** was named industrial manager of the Richmond, Va. office.

Obituaries

Robert L. Warren, 70, former president and retired board chairman of Brockway Glass Co., died recently at his home in Brockway, Pa.

Eight executives of Continental Can Co.'s Metal Division and two of its pilots died last month in a tragic air accident. Returning from a Chicago Conference they were: **J. de Bliek,** manager, of the firm's Passaic, N. J. can plant; **J. M. Kelly,** Eastern Division manager of production engineering; **W. J. Mutschler,** general manager of production engineering; **M. D. Sandine,** general manager of the mid-eastern district; **H. G. Schier,** manager of equipment maintenance; **A. W. Sherwood, Jr.,** eastern division sales manager of nonfood cans; and **R. I. Weimerskirch, Jr.,** manager of products and materials standards. The pilots were **John R. Dunham** and **Donald Martin.** The plane crashed six miles east of Marion, Ohio.

George C. Moore, 42, marketing director of distributive products for Merck & Co., Inc., Chemical Div., died recently at his home in Westfield, N. J.

Prompt service to belt users is assured by two factories, one in the Middle West and one on the Pacific Coast.

CY BELT says

"We make more different types of processing belts than anyone else!"

Cyclone makes all four basic styles of conveyor belting: spiral woven friction drive, spiral woven chain drive, flat wire friction or sprocket drive, and flex-grid. These are available in the widest variety of sizes, meshes, weaves, steels and alloys. We make reinforcing members, flights, side plates and other specialties to meet specific needs. That's why our recommendation can be tailored to *your* plant and *your* product. Why not contact a trained Cyclone representative for help in analyzing your processing and material handling problems? Fill in the coupon today.

USS and Cyclone are registered trademarks

USS **Cyclone Metal Conveyor Belts**
Spiral Woven · Flat Wire · Flex-Grid

Cyclone Fence Dept.
American Steel & Wire
Division of
United States Steel

USS

Manufactured at Waukegan, Ill. and Oakland, Calif. - Sales Offices, Coast to Coast

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Dept. D 89, 614 Superior Avenue, N.W.
Cleveland 13, Ohio

Please send me, without obligation, your catalog No. 5 on Cyclone Processing Belts.

Name.....
Company.....
Address.....
City..... State.....

Quality Is Important in Shelling of Peanuts

Quality factors important to the successful shelling of peanuts is a very broad and comprehensive subject but can be condensed pretty much to the following—Peanuts whose characteristics of quality lend themselves to an efficient milling operation and produce a finished product that meets the specifications of quality required by the manufacturer. A good peanut for the sheller is one that makes money.

Quality of farmers stock peanuts is the biggest single factor in the cost of shelling and/or cleaning operation. As any one of the quality factors deteriorates, the shelling costs substantially and proportionately increase.

Peanuts are an agricultural commodity that are subject to all the whims and vagaries of weather conditions prevailing at the time of planting.

• Peanuts that are well matured are healthier, resulting in a more uniform size—the skin is smooth and in general shriveled kernels are at a minimum. It has a full, pleasant flavor and in general is free of the small, hard, rocklike kernels that are present in immature peanuts and where too much heat has been applied too rapidly.

• Uniform and normal moisture content is very essential. A peanut that is too dry results in excessive skin slippage, and exhorbitant splitting during the shelling process. Further, in cooking, additional splitting occurs, and many skinless peanuts appear.

• Initial quality control must start at the farm level. Poor timing in digging often results in immature kernels. Improperly controlled heat in the curing and drying process can produce varying degrees of off-flavor, undue dryness, skin slippage, hardness and cracked and broken shells through which infestation and contamination has its beginning to nothing of loose shelled kernels that are a very definite quality control problem. Nothing insulates a peanut against damage like the sound shell God gave it for protection.

—B. M. Birdsong, Birdsong Storage Co., at annual meeting of Peanut Improvement Working Group in Albany, Ga.

"10 MINUTE OLIVE KABOBS" will be a featured recipe during the promotion for National Green Olive Week, August 6-15. Ingredients of this new recipe include pimiento stuffed olives, canned cling peaches and canned luncheon meat.

Crisp and Easy To Follow Recipes are Collected

Most women collect recipes. Whether they use them (and therefore your product) or not may be up to you. If experience has shown the homemaker that you print good recipes, she will probably try each new one you offer. But today's homemaker insists that her recipes be accurate and easy to follow. She avoids vague directions, complicated procedures, or print that is hard to read. Here are a few pointers to raise your recipe rating:

• Use only thoroughly tested recipes, based on modern methods, equipment and supplies.

• Play up your product with a recipe that is a little different.

• Select a recipe style that is easy to follow. Modern recipes usually list all ingredients and then describe the method.

• Use type large enough to be seen from the work surface without bifocals.

• Position recipes appearing on packages so they may be followed without spilling the remaining contents.

• Avoid printing recipes on shiny surfaces that reflect light.

• Change recipes frequently.

• List the size of pan to use in preparation. Also, an indication of the number a recipe will serve.

• Appeal to different users. An occasional large quantity recipe or a "for TWO" size one will sometimes attract new users.

—Ruth Klippstein, Extension Nutrition Specialist, Oregon State College.

Wholesale Distribution Prices Vary With Each Company

There are wide variations in individual items of cost in the wholesale distribution of frozen foods by different companies. Comparison of a cost item of one firm with the average for many firms, therefore, can provide a guide to improved economy and efficiency.

Major factors affecting operating costs in the industry were found to be:

1—Average size of orders.

2—Labor productivity in terms of man-hours per $100 of sales.

3—Average hourly wage rates.

4—Efficiency in use of working capital as measured by inventory levels and amount of credit extended.

5—Services provided to customers.

—Factors Affecting Costs of Wholesale Distribution of Frozen Foods, Marketing Research Report No. 327, U. S. Dept. of Agriculture.

Freddy the Freezer makes a discovery...

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That's right. You're using our vitamin C to protect natural color and flavor. You're using enough to make a label claim without extra cost.
Here's what your labels can say—"one 4-ounce portion provides 100% of the minimum daily adult requirement of vitamin C."
So Freddy has new labels printed
Freddy's Palace
Freddy's sales boom. Yours can, too, because people are vitamin C conscious.
Find out more from the
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There's strong *appetite appeal* in Muirson's nature-color reproduction. And that's what sells food. But just as important, your labels must be handled efficiently — from original design straight through to delivery *on time*. Whether your next order is large or small, it will pay to consult a *specialist*.

because MUIRSON *specializes* in LABELS

This page produced in its entirety by Muirson Label Co. Inc.
Complete plants in San Jose, Calif.; Peoria, Ill.; and Meriden, Conn.

INDUSTRY NEWS

Companies & Plants

P. J. Ritter Co., specialty food packer of Bridgeton, N. J. has won the American Legion "Certificate of Appreciation" citation for 1958. The award is made annually to employers who have established outstanding records for employment of the physically handicapped, especially disabled veterans.

Catelli-Habitant Ltd. of Montreal, Quebec, may establish a new food processing industry on the irrigated lands of southern Alberta. C. L. Sibbald, the firm's western manager at Lethbridge, Alberta, said his company will carry out some experimental processing with southern Alberta grown cucumbers and tomatoes this year. A pilot plant will be set up in Lethbridge this fall to process the two vegetables into spiced pickles.

Bramble Canning Corp., Greenwood, La., will be ready for operation by July 15, according to Edward C. Hudson, the new plant manager. The company recently expanded the plant and added new canning equipment.

A. E. Staley Manufacturing Co., Decatur, Ill., is entering the synthetic polymer field. A polymer pilot plant was put into operation at Decatur early this year and is now in semi-works production of acrylic-type emulsions. The firm has also acquired the UBS Chemical Corp., Cambridge, Mass. The chemical firm has a plant and laboratories in Cambridge, a new polymer plant at Lemont, Ill., a polymer plant and laboratory currently under construction at Marlboro, Mass., a technical laboratory near Greenville, S. C., and other facilities.

Ralston Purina Co., St. Louis, Mo., was awarded a Silver Anvil, the "Oscar" of the public relations field for the outstanding educational public relations campaign of 1958 by the American Public Relations Assn.

Stalfort Pressure-Pak Corp., Baltimore, Md., has a new sanitary filling line for packaging any product suitable for aerosol dispensing. The line has a capacity of 120 units per minute. Food products now being tested are salad dressing, garlic sauce, sundae topping, cake frosting, barbecue sauce, and meat tenderizer.

Butler Frozen Food Co., Huntsville, Ala., destroyed by fire last March, has started construction of a new $50,000 frozen food plant. The plant is being built on a 150-by-385-ft. lot on St. Clair Ave. The entrance will face a street to be opened between St. Clair Ave. and Governors Dr., S. W.

Puritan Food Sales Ltd. is planning to build a $250,000 canning plant in Halifax, Nova Scotia.

Consolidated Foods Corp., Chicago, Ill., processor and distributor of foods, is purchasing the Merckens Chocolate Co., Inc., Buffalo, N. Y., for cash. Merckens produces chocolate coatings and related products. August Merckens will continue as president.

North Shore Packing Co., Vancouver, B. C., is erecting a $90,000 reduction plant and warehouse plant for fish products in Delta, B. C.

Salada-Shirriff-Horsey Ltd. has opened a new modern tea blending and packaging plant in Woburn, Mass. The plant employs 350 and is the headquarters for the firm's Salada-Junket Div.

Marksville Canning Co., Inc. will construct a canning plant in Marksville, La., which should begin operation in the spring of 1960. Products to be processed include sweet potatoes, corn and beans.

S&W Fine Foods, Inc., San Francisco, Calif., recently sold its citrus processing plant and properties at Bradenton, Fla. A local construction group purchased it and will operate it as a warehouse.

United Frozen Foods, Inc., Gulfport, Miss., has been granted a charter of incorporation to do business as a wholesaler and retailer at any location in Mississippi or any state in the line of frozen foods. Incorporators are Hughes Scheiduax and Richard M. Page, both of New Orleans, La.

Borden Co. is concluding plans for the acquisition of the F. H. Snow Canning Co., processors of clams. The transaction involves an exchange of Borden stock; the amount is not known.

Men in the News

C. Chester Jung, vice president of Calumet & Hecla, Inc., was named to the board of directors of Booth Fisheries Corp., Chicago, Ill.

Albert G. Fox, formerly sales manager of Blue Label Specialty Foods, Curtice Bros., Rochester, N. Y., was appointed sales manager in charge of domestic and foreign sales of the H. J. McGrath Co., Baltimore, Md.

Gene Herbrandson was appointed regional manager in the Midwest area of Stokely-Van Camp, Inc., Frozen Food Div. The firm's headquarters are in Oakland, Calif.

Robert H. Saunders was appointed institutional division sales manager of Crosse & Blackwell, with headquarters at the firm's main office in Baltimore, Md.

Larry J. Doyle was appointed president of Klein Super Markets, Inc., a subsidiary of Consolidated Foods Corp., Chicago, Ill. The firm operates 26 Piggy Wiggly Markets in St. Paul and Minneapolis, Minn.

Stuart C. Sherwood was appointed operations vice president of Fairmont Foods Co., Omaha, Neb. Charles P. Fisher was named general sales manager.

Charles L. Hurley, Tom and **Newt Cloud,** and **John Fischner** have purchased a locker plant in Hempstead, Texas, for a reported price of $25,000. It will be operated as Cloud's Food, Inc. The plant was formerly operated by the Brazos Valley Refrigeration Co-op.

Robert T. Foster, vice president of merchandising and procurement for John Morrell & Co., will soon establish offices in the firm's Chicago office.

Ward J. Jenssen, Ph. D., recently formed a management consulting firm, Ward J. Jenssen, Inc., specializing in the "people-problems" of business and industry. The firm has a special division serving the retail food field.

William Filz, formerly with Coastal Foods, Cambridge, Md., has joined the North Pacific Canners & Packers, Portland, Ore.

James E. Curtiss, patent counsel, National Biscuit Co., New York City, was elected treasurer of the United States Trademark Assn.

Earl Price, vice president of Libby, McNeill & Libby, retired recently after 43 years of service. Mr. Price was in charge of pickle and olive sales.

Frank J. Guthrie was elected vice president, domestic sales of Stahl-Meyer, Inc., a 123-year-old meat-

packing firm with headquarters in New York City.

C. M. Cavileer, Jr.

N. G. Fox

W. E. Carey

H. B. Housh

Curtis M. Cavileer, Jr. was named vice president and general manager of Lutz & Schramm, Inc., Pittsburgh, Pa., processor of pickles, jams and jellies, a division of Beatrice Foods Co.

Nathan G. Fox was appointed vice president in charge of research and development of Chun King Associated Enterprises, Duluth, Minn., American-Oriental food packer.

William E. Carey has resigned as executive vice president of Ocoma Foods Co., Omaha, Neb. He will become president of Universal Marketing Assn., Inc., New York City.

H. B. Housh was appointed vice president in charge of the Allied Products Group, Wilson & Co., Chicago, Ill. The Group is responsible for Dairy and poultry, refinery and Menu-Pak operations.

Obituaries

Charles K. Mason, 75, a retired assistant treasurer of Best Foods, Inc., New York City, died recently after a long illness. Mr. Mason was a resident of Plainfield, N. J.

Frank Pieper, 69, director and paymaster of Valders Canning Co., Valders, Wis., died recently following a six months' illness. He had been with the firm for over 30 years.

Earl Roder, 62, pack planning and control manager of the Midwest division of California Packing Corp., died recently at Rochelle, Ill. Mr. Roder had been associated with the Rochelle Canning Co. before its acquisition by Calpak. He has been with Calpak 33 years in various managerial posts at Sleepy Eye, Minn.; Arlington, Minn.; and Arlington, Wis.

NEW PRODUCTS AND PACKAGES

Frozen Rice

Comet Rice Mills, Dallas, Texas, has introduced a fully-cooked frozen rice. Two minutes in boiling water and it is ready as a hot vegetable. If used

as a cereal, dessert, or as an ingredient in salads, the rice can be spooned out and used without any preparation.

Instant Tea

Thomas J. Lipton, Inc., Hoboken, N. J., is introducing new Lipton Instant Tea in limited areas of the country. The new product is soluble in both warm and cold water. The jar is slim and round with a screw top which contains product information. The word "instant" has a prominent place on the wrap-around label.

Canned Beans

The Illinois Canning Co., Hoopeston, is packaging new "caliente style" beans in hot chili gravy under the firm's Joan of Arc brand. The beans are being marketed in round (300) cans supplied by the American Can Co. The product is being distributed nationally in chain and grocery stores and retails at two cans for 29c.

Sweet Peas and Onions

Oconomowoc Canning Co., Oconomowoc, Wis., has packaged a combination of sweet peas and imported Dutch onions to introduce its new Land O' Lakes label. The new label has a continuous wrap-around pattern which requires no special placement of the cans on the shelf.

Vegetable Thins

National Biscuit Co., New York, N. Y., recently introduced a new product—Vegetable Thins. A primary ingredient in these crackers is dehy-

drated vegetables (carrots, onions, tomatoes, celery, cabbage, and sweet red bell peppres). The crackers are packed under the Nabisco label and are packaged in cartons bearing a family resemblance to other Nabisco products.

Imitation Maple Syrup

Corn Products Sales Co., New York City, has introduced a new type of

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Paperlynen Caps are ADJUSTABLE to any headsize. Insure perfect fit. Light and comfortable. More ECONOMICAL. Reduce your present Cap expense by 50%. Distinctive with your special imprint. Millions used annually by nationally known companies. Just mail coupon below with manager's signature and we will send you absolutely FREE, a Patented Adjustable Paperlynen Service Cap.

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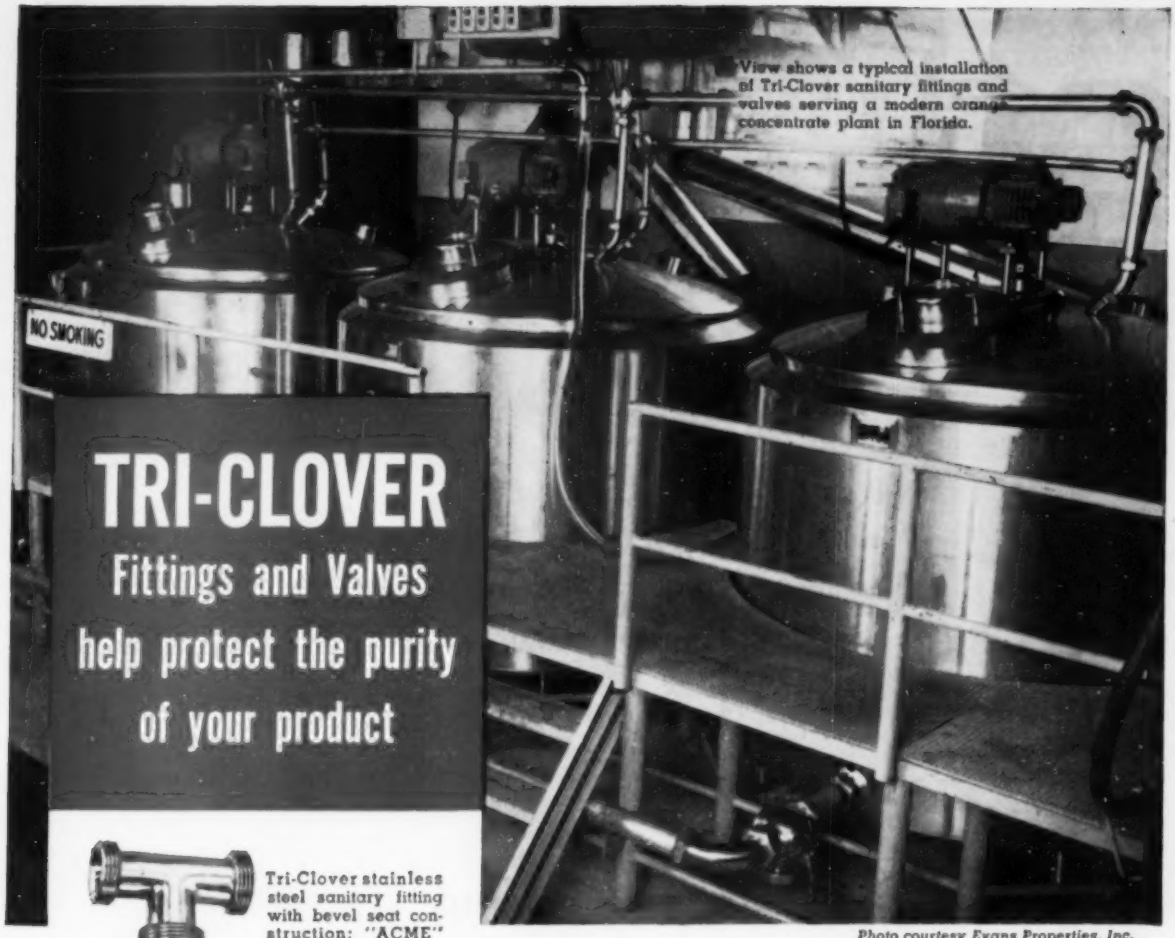


View shows a typical installation of Tri-Clover sanitary fittings and valves serving a modern orange concentrate plant in Florida.

TRI-CLOVER

Fittings and Valves help protect the purity of your product

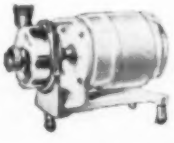
Photo courtesy Evans Properties, Inc.

Tri-Clover stainless steel sanitary fitting with bevel seat construction; "ACME" sanitary threads.

Tri-Clover Tri-Clamp fittings offer quick easy assembly and disassembly; long trouble-free fitting life.

Tri-Clover stainless steel valves are available in a full range of types and sizes to meet every requirement.

Tri-Clover full-flow magnetic traps employ an Alnico magnet to assure maximum removal of tramp metal.



Tri-Clover sanitary centrifugal pumps are fabricated of highest quality corrosion-resistant metals to provide efficient long-term service.

It takes quality to make quality! That's why so many food processors, bottlers and brewers select Tri-Clover Division's stainless steel fittings, valves and pumps for the quality design and construction that protects the quality of their products.

Through continual research, Tri-Clover has developed exclusive stainless steel design features that guard against corrosion, assure the highest degree of sanitation at all times, and provide quick, positive control of liquid flow. Fast assembly and disassembly, easy cleaning, and long, reliable service add economy to Tri-Clover Quality.

Let Tri-Clover engineers help you solve your piping and pumping problems. Write for descriptive literature.

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U. S. NO. 1 GRADE

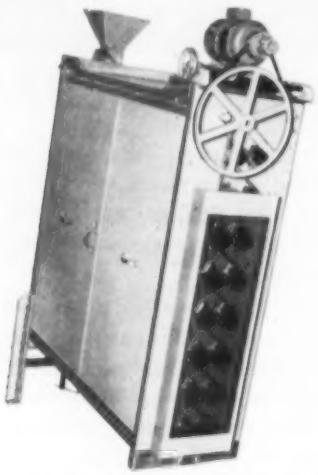
To show the difference, we are always glad to buy a bag or package of U. S. No. 1 Grade beans at any retail store and reclean them in a *Warsco* demonstrator, which operates exactly like the full-size machine.

ALL THESE DREGS

After cleaning has been completed, it is quite common to find all these dirt clods, weed seeds, pebbles, splits and other dregs which have been removed from this single bag or package of U. S. No. 1 Grade beans.

AAA-1 CLEAN BEANS

The actual beans really are AAA-1 clean; and they look smoother, more polished . . . thanks to Warsco's buffing action. Such super cleanliness is your assurance of reduced public liability and consumer complaint.



HERE'S THE CLEANER

. . . the sturdy, efficient unit that cleans all types and sizes of beans at the rate of 2,000 to 3,000 pounds per hour. The *Warsco* removes dirt, weed seeds, rocks, and most splits automatically. Expensive hand picking is practically eliminated. You get premium beans plus substantial savings in labor costs.

SALES-BUILDING PREMIUM LABEL

(shown below) has been designed for *Warsco* users. It may be printed on bags or packages for an added sales feature or to justify premium price of premium beans.

FREE BOOKLET GIVES FULL DETAILS

Shows and explains all the fabulous features of the new *Warsco* Bean Cleaner. . . and what it can do for you. Write for your free copy; no obligation.

WARSCO-CLEANED PREMIUM BEANS

WARSCO DIVISION

W. A. RICE COMPANY—Jerseyville, Illinois

Karo Syrup which is known as Karo Imitation Maple Syrup. It is lighter in body and maple-y in taste. The syrup is packaged in new 12 and 24 oz. pinch-waist, tall and trim highboy bottles.

New Package Briefs

Sundae Toppings in Clear Glass: Sea Snack Co., Philadelphia, Pa., is packaging its Sundae Snack line of fountain toppings in 7 oz. glass tumblers manufactured by Hazel-Atlas Glass Div., Continental Can Co. Brand and product names are printed on closures, supplied by Anchor Hocking Glass Co.

Horse Radish Goes Modern: H. J. Heinz Co., Pittsburgh, Pa., has redesigned its old fashioned octagonal paneled jar. Heinz Horse Radish is now packaged in a shorter, straight sided jar which features a wide opening. The newly designed label uses traditional lettering yet still maintains a clean modern appearance. Jars are by Brockway Glass Co., Brockway, Pa.; labels by Fuller Label and Box Co., Pittsburgh, Pa.; closures by Owens-Illinois Glass Co., Toledo, Ohio.

Table Decanter for Vinegar: National Fruit Products Co., Inc., Glassboro, N. J., has introduced its White House brand wine vinegar in new table service decanters with twist-off caps. Brand identification and a recipe for Italian salad dressing are embossed in white on the sides of the clear glass. Jars are by Anchor Hocking Glass Corp., Lancaster, Ohio; caps by white Cap div. of Continental Can Co.

Red Raspberry Carton: Lynden Berry Growers, Inc., Lynden, Wash., has adopted a completely new carton for its red raspberries. The design of the carton lends itself to attractively stacked displays. Labels are by Muirson Label Co., Inc.

New Label for Beans: Fam'ly Joy brand cut green beans are being packaged in cans with a newly designed label. The brand is distributed by the Commision Co., Inc., Seattle, Wash.; labels are by Muirson Label Co., Inc.

Dog Food Carton: Barker-Gains Div., General Foods Corp., White Plains, N. Y., is packaging Gravy Train and Rally brand dog foods in polyethylene coated cartons produced by the U. S. Printing & Lithograph Co., Cincinnati, Ohio. Polyethylene coated interiors give the products protection and moisture proofness without the use of an inner wrapping.

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big buy!

Products with the *big look* stimulate the buying impulse of the busy shopper. Only multiple packaging puts the big look right in the middle of crowded retail shelves where it really stands out. Better yet, only multiple packaging backs up the big look with a *big buy* to match.

Discover the new potentials and new directions of this high-powered merchandising combination. . . . Send today for a revealing, factual analysis of a recent survey on multiple packaging, conducted by Container Corporation in cooperation with National Canners Association.

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Research and Marketing Center, 5000 Flat Rock Road, Philadelphia 27, Pa.

ASSOCIATION ACTIVITIES

Pennsy. Canners Discuss Legislative Matters

The sales and use tax law, a proposed excise tax on soft drinks (fruit juice drinks), wage and hour regulations for women employees, a new food law, marketing orders, and migratory labor, were among the matters discussed at an open board of directors meeting of the Pennsylvania Canners Assn. The meeting was held in mid-May at Bedford Springs Hotel, Bedford, Pa.

The PCA food technology committee, under the chairmanship of Charles Farley, D. E. Winebrenner Co., did some preliminary work and explored "program ideas" for the 1960 Canners' workshop. The workshop will be held March 3-4 at Allenberry Lodge, Boiling Springs, Pa.

Robert K. Free. Hungerford Packing Co., and PCA vice president, discussed ways and means of promoting canned foods with members of the sales and merchandising committee. The committee members also offered ideas regarding other problems facing the canners in the sale of their products.

Edwards Named Chairman of Annual NAFC Meeting

Claude W. Edwards, president of Alpha Beta Food Markets, Inc., La Habra, Calif., was named chairman of the 26th annual meeting committee of the National Association of Food Chains. The meeting will be held in Washington, D. C., at the Sheraton Park and Shoreham Hotels, October 18-21.

At last year's meeting, Mr. Edwards served as chairman of a daily session planning committee. He was for many years a member of NAFC's board of directors and has served as vice president of the association. Mr. Edwards stated that the means of other 26th annual meeting officials will be announced shortly.

Broker Booklet Tells How to Increase Sales

Suggestions on strengthening sales efforts so as to increase the sales volume of frozen foods are given in a new booklet entitled, "NFBA Covers the Cold Front." The frozen foods committee of the National Food Brokers Assn. prepared the booklet which is now being distributed to the association's members and to packers.

The booklet stresses the importance of the relationship between packer and food broker. Both groups are given suggestions on how to achieve marketing teamwork which is important in frozen food sales.

Executive Director Named

Thoms J. Raser, Jr. was named executive director of the American Institute of Food Distribution. He will be responsible for directng the activities of the employed staff and expanding the several information services and membership. The organization supplies its membership of about 3,500 processors, manufacturers, brokers, wholesalers, chains, banks, etc., with special services which inform them of trends, conditions, etc.

NCA Publishes 1959 Directory

The National Canners Assn. has published its 1959 Canners Directory, listing NCA members and other commercial canners in the U.S. Other listings included in this directory are a commodity index, NCA officers and committees, state and regional canners associations, and members of the Canning Machinery and Supplies Assn. and National Food Brokers Assn.

The directory is being sold by the association for $3.50. Orders must be accompanied by check or money order payable to the National Canners Association.

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with exclusive Floating Cone*

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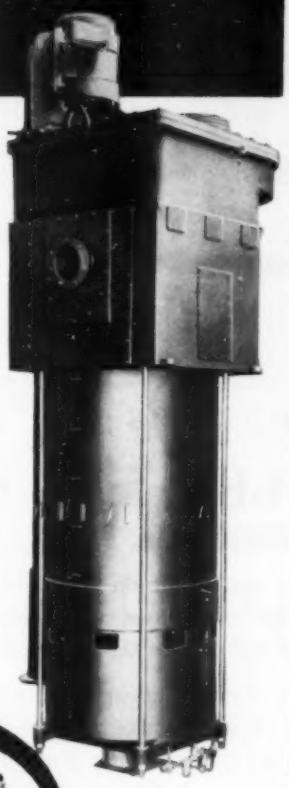

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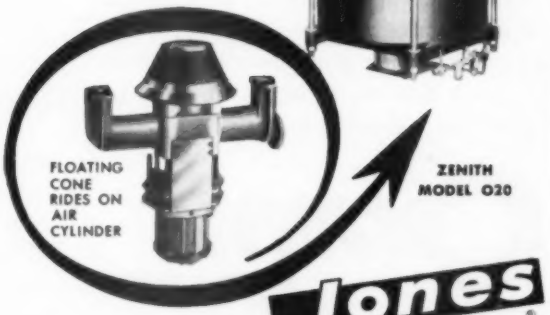

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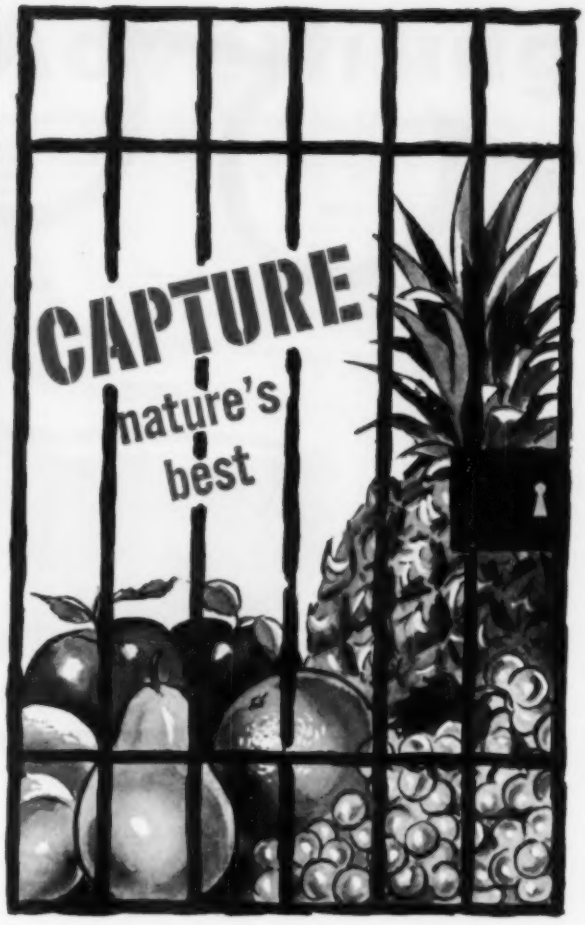

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FOR SALE — FMC Stainless Crusher - Preheater. Standard Knapp #429 Top Gluer. Fitzpatrick st. st. Comminuting Machines models D & F. 3,000, 3,700 gallon stainless steel vacuum tanks with coils. Niagara Pressure Leaf Filters: 500, 100 sq. ft., Stainless Steel. Hope Piston Filler. SEND US YOUR INQUIRIES. **PERRY EQUIPMENT CORP.**, 1405 N. 6th St., Philadelphia 22, Pa.

FOR SALE—2 Pickle Grading Machines, 6 Pumps & Motors, 2 Brine Tanks, 21 Cypress Pickle Tanks. All equipment in good condition. A. Fenster Corp., Care, Michigan.

FOR SALE—2 Alvey Pallet Loaders, installed new 1954; total cost $60,000; in daily operation until August; purchase one or both, several sets of patterns. Also Standard-Knapp 830 duplex packer, new 1954; can be shipped immediately; write for details to BOX 189.

229 TANKS FOR SALE—Free listing of glass and Lastiglass-lined tanks, horizontal and vertical from 2000-16000 gal. cap; also bolted and sectional types; Immediate delivery, f.o.b. shipping points; price 3c gal. and up, depending upon type and quantity desired. Mostly brewery type tanks, ideal for food, chemical and water storage. CHAS. S. JACOBOWITZ CORP., 3080 Main St., Buffalo 14, New York, Phone: AM 2100.

FOR SALE—3 Only, 2500 gal. ea. practically new Lithcote-lined tanks, used in food processing plant in Buffalo, 62" x 15' long, with manholes, covers, 2" vent, 2" outlet, float gauge, supporting legs, etc., like new, buy one or all, $450 ea. f.o.b. truck, Buffalo, N. Y., while they last. BOX 289.

FOR SALE—Niagara Model 275 stainless steel filter, diatomaceous type, 275 sq. ft. area approx., separate stainless feeder, 17 stainless riveted leaves, immediate delivery, half price. BOX 389.

FOR SALE—Complete Goebel Brewery, Muskegon, Michigan, plant including practically new bucket and screw conveyors; 6000 gal. phenolic-lined hot water tanks, Fairbanks-malt scales and hoppers; 2—1650 bu. cap. ea. bins, 8' dia. x 42' high; 7000-gal, copper steam-jacketed cooker; 20 Oak and cypress tanks, 3000-6000 gal. cap. ea., approx.; buy one or several; Meyer-Dumore Model 1160 Cataract pasteurizer or cooler; 36" dia. stainless filler; Standard-Knapp Model 830 case packer $1500; Economy Style 72F3, Baler, Rapids-Standard Handibelt 10' conveyor, 65' Alvey Fig. 400 chain conveyor, several floor to floor belt conveyors; all AC motors; Rapids 12' power booster; 2—15,000 gal. insulated oil tanks, approx. 10' dia. x 24' long; Pomona deep well pump, cap. 90 GPM against 75' head; 2 Nash Hytor air compressors, with AC motors; York 9x9, 8x8, 7½ x 7½ ammonia compressors with AC motors; 70, 60, and 40 HP, 60 cycle, 220/440 volt motors and starters; ammonia receivers, condensers, "Superior" 100 HP, package-type steam generator, new 1947 complete with all accessories; Buffalo exhaust fans; Permutit water treating system; 10 air receivers 30" dia. x 10'6" high, ASME stamped; 15 misc. pumps, all AC motors; thousands of dollars worth of brass fittings and tubing, ammonia valves; everything for a complete plant. Write for complete list to exclusive liquidating agents, Chas. S. Jacobowitz Corp., 3080 Main St., Buffalo 14, N. Y. Phone AM 2100.

FOR SALE—FMC Full screen all stainless pulpers Model 101, Urschell Model O slicer, Urschell Model B dicer, 5-250 & 2-400 Stainless Tanks, 2-3400 Glass lined tanks, St. Knapp 8 oz. caser, Std. Knapp 211x 414 caser, Screw cooker 12" x 20 ft., No. 2½ and #10 Syrupers by FMC, King #10 stainless twin filler, Majonnier 500 gal. juice vacuum pan stainless, 2HP Mund 100# boiler, Harrix 18 valve stainless bottle filler, Walking beam cooler 8 ft. x 20 ft., Reitz 18" stainless disintegrator, FMC 4 unit juice pasteurizer, Tuc Continuous can shaker, 3—100 gal. SS agit Kettles. CALIFORNIA MACHINERY EXCHANGE COMPANY, 420 Market St., San Francisco, Calif.

FOR SALE—Complete Blackeye pea line as follows: 2 Chisholm Ryder All Steel Viners, complete with chain conveyors, elevators, belt drive, with 46 HP gasoline engine; 2 Gould's centrifugal pumps with 4" intake and 4" discharge belt driven; 1 12 ft. hot water blancher complete with reduction gear; 1 Sinclair Scott Rod Washer RW 619; 1 pea holding hopper; Ayars 5 Pocket Filler with change parts for #303 and #2 cans; 2 Dewatering Reels; 2 Wolfinger Beet Slicers. L. H. Moore Canning Company, McAllen, Texas.

FOR SALE—6 National Pickle Graders on an as is basis . . . . $25.00 each. Lang Salting Station, Mt. Pleasant, Michigan.

FOR SALE—DeZurik Automatic Consistency Controller. Like new. Also Peerless Rotary Corn Washer. J. C. La Rue Co., Inc., Crawfordsville, Indiana.

20 gal. thru 125 gal SS Groen kettles in stock. ABC Mod XSA Case Sealer. ABC Mod XSSA Case Sealer. Send for complete listings. We buy and sell. Aaron Equipment Company, 9370 Byron, Schiller Park, Ill.

WANTED MACHINERY

Will purchase Canco 00-6 and 00-8 Double Seamers with change parts for Packers Cans. In the market for any other surplus can closing and can making machinery. Joma Machinery Co., Ltd., Commercial Ave., W., Moonachie, N. J.

WANTED—1, 5 or 10 HP Vertical Hammer Mill, also 1 cabbage corer. Hartwick Foods, 128 E. Pioneer St., Phoenix, Ariz.

HELP WANTED

Large Manufacturer of Canning Machinery Equipment is looking for a salesman. Machinery sales experience preferred but not essential. However, must have knowledge of the Canning Industry. Earning potential in five figures based on Salary plus Commission. Write Box 279.

WANTED

Energetic man between 25 and 40, experienced in food technology, to assist in the development of new products for the world's largest almond processing plant. Salary commensurate with capabilities. Steady employment with attractive fringe benefits. Give full references pertaining to background in first communication. Information will be kept confidential if so desired.

Communicate with
General Superintendent
CALIFORNIA ALMOND GROWERS EXCHANGE
Sacramento, California

POSITIONS WANTED

Pickleman possesses complete production knowledge, techniques and experience in both processed and fresh pack type pickle operation. Can manage help. Proved record of accomplishment. Desires a position of responsibility with progressive firm. Box 379.

WANTED — Plant Superintendent for established Southern Canning plant canning peaches, pimientos, sweet potatoes and specialties. 200 employees. Must be sober and capable of taking full responsibility production and maintenance. State age qualifications and salary expected. Box 179.

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FOR SALE

- (1) No. 10 Burt Labeler, Model AUPA
- (2) Complete Cherry Lines, 5 & 9-ton per hour
- (2) CRCO Model F Bean Snippers
- (4) Late Model FMC Double Corn Huskers
- (2) Acme Silver Stitchers
- (3) Allan Applesauce Machines, 375, 280, & 150 cases per hour
- (1) FMC S.S. Pasteurizer, 30—1½" tubes
- (1) No. 10 Panama Closing Machine
- (1) FMC Continuous Steam Peeler (High Pressure)
- (1) FMC Continuous Pressure Cooker No. 2 and 303
- (1) No. 10 Weber Apple Filler
- (12) Pease Double Apple Parers, also Triples
- (1) FMC Continuous Abrasive Peeler
- (3) FMC Hand Pack Fillers for 8 oz., 303's, and 10's
- (4) .006 Canco Closers for 2's, 2½'s, 300's, & 303's, perfect
- (3) Urschel 30-C Bean Cutters, motors, S.S. Hoppers
- (1) 25 HP Amesteam Boilers, 100#, pump & return system
- (1) Complete line equipment for custom cannery
- (3) Boxers for 2's, 2½'s, & 303's, Burt & Kyler
- (2) Cabbage Corers, single & Double, also Slicer
- (4) CRCO #5 Bean Pregraders, belt drive
- (1) 11' Huntley Blancher, drum 2 yrs. old
- (1) 8' Huntley Blancher, S.S. drum
- (1) 150-gal. S.S. Lee Tank with coils
- (2) DeZurick Corn Consistometers with motors

WRITE FOR 1959 CATALOG — 10,000 ITEMS

Serving the food processing industry since 1912

COMING EVENTS CALENDAR

August

3-7—**National Dietary Foods Assn.**, Hotel Olympic, Seattle, Wash.
10-12—**American Soybean Assn.**, 39th annual convention, Sheraton-Jefferson Hotel, St. Louis, Mo.
10-12—**National Food Distributors Assn.**, 32nd annual meeting, Sherman Hotel, Chicago, Ill.
13-15—**Institutional Food Distributors of America Div.**, USWGA conference and mid-year meeting, Green Briar Hotel, White Sulphur Springs, W. Va.
13-15—**U. S. Wholesale Grocer's Assn., Inc.**, midyear meeting, Greenbrier Hotel, White Sulphur Springs, West Va.
23-25—**1959 Internation Clover Farm**—Foodland, 33rd anniversary convention, Toronto, Ontario.
23-26—**National Assn. for the Specialty Food Trade**, 5th annual Fancy Food & Confection Show, Hotel Astor, New York City, N. Y.
26-28—**Pacific Coast Oyster Growers Assn.**, 13th annual convention and 25th annual meeting, Benjamin Franklin Hotel, Seattle, Wash.

September

9-10—**Pet Food Institute**, 2nd annual convention, Drake Hotel, Chicago, Ill.
22-24—**Institute of Sanitation Management**, sanitation maintenance conference and show, Hotel New Yorker, New York City.

October

15-16—**Quartermaster Assn.**, annual convention, Hotel Statler-Hilton, New York, N. Y.
15-17—**Florida Canners Assn.**, 28th annual convention, Hollywood Beach Hotel, Hollywood, Fla.
21-23—**National Agricultural Chemicals Assn.**, 26th annual meeting, French Lick-Sheraton Hotel, French Lick, Ind.
25-28—**National Frozen Food Distributors Assn.**, merchandising exposition, Sherman Hotel, Chicago, Ill.
29-30—**National Pickle Packers Assn.**, annual meeting, Drake Hotel, Chicago, Ill.
29-31—**Florida Canners Assn.**, 28th annual meeting, Hollywood Beach Hotel, Hollywood, Florida.

November

5—**Illinois Canners Assn.**, fall meeting, LaSalle Hotel, Chicago, Ill.
9-10—**Wisconsin Canners Assn.**, 55th annual convention, Schroeder Hotel, Milwaukee, Wis.
17-20—**Packaging Machinery Manufacturers Institute, Inc.**, "PMMI Show of 1959," New York Coliseum.
23-24—**Michigan Canners' and Freezers' Assn.**, fall meeting, Pantlind Hotel, Grand Rapids, Mich.
24-25—**Pennsylvania Canners Assn.**, 45th annual convention, Yorktowne Hotel, York, Pa.

December

7-8—**Tri-State Packers Assn.**, annual meeting, Haddon Hall, Atlantic City, N. J.
9-11—**Grocery Manufacturers of America**, Waldorf Astoria, New York, N. Y.
12-16—**National Food Brokers Assn.**, National Food Sales Conference, Chicago, Ill.

January

4-6—**Northwest Canners' & Freezers' Assn.**, annual convention, Olympic Hotel, Seattle, Wash.
7-8—**Canners League of Calif.**, 37th annual Fruit & Vegetable Sample Cuttings, Fairmont Hotel, San Francisco, Calif.
18-23—**National Canners Assn.—Canning Machinery & Supplies Assn.**, annual convention & exhibit, Hotel Americana, Miami Beach, Fla.

February

9-11—**Wisconsin Canners Assn.**, Raw Products Conference, Wisconsin Center Bldg., Madison, Wis.
22-24—**Canadian Food Processors Assn.**, annual convention, Seigniory Club, Montebello, Quebec.

March

3-4—**Pennsylvania Canners Assn.**, annual workshop, Allenberry Lodge, Boiling Springs, Pa.
6-10—**National Assn. of Frozen Food Packers**, 19th annual convention—exposition, Conrad Hilton Hotel, Chicago, Ill.
20-22—**Canners League of Calif.**, 56th annual meeting, Santa Barbara Biltmore, Santa Barbara, Calif.
22-23—**Wisconsin Canners Assn.**, spring meeting, Wisconsin Center Bldg. and Loraine Hotel, Madison, Wis.
25-26—**Institutional Food Distributors of America**, annual meeting, Auditorium, Dallas, Texas.
27-30—**U. S. Wholesale Grocers Assn.**, annual meeting, Auditorium, Dallas, Texas.

Merchandising Calendar

Sept. 1-30: Natl. Better Breakfast Month (Cereal Institute, Inc., 135 S. LaSalle St., Chicago 3, Ill.).
Sept. 1-30: Natl. Better Breakfast Month.
Sept. 7: Labor Day.
Sept. 20-26: Natl. Dog Week.
Oct. 1-31: Natl. Rice Harvest Festival (Rice Consumer Serv., Realty Bldg., Louisville 2, Ky.).
Oct. 1-31: October Cheese Festival (Amer. Dairy Assn., 20 N. Wacker Dr., Chicago 6, Ill.).
Oct. 11-17: International Pizza Week (International Pizza Club, Box 213, New York 1, N. Y.).
Oct. 12: Columbus Day.
Oct. 15-24: Natl. Macaroni Week (Natl. Macaroni Inst., 139 N. Ashland Ave., Palatine, Ill.).
Oct. 15-24: Natl. Apple Week (Natl. Apple Week Assn., 1302-18th St., N. W., Washington 6, D. C.).
Oct. 17: Sweetest Day.
Oct. 17-25: Natl. Donut Week.
Oct. 19-25: Natl. Fish and Seafood Week (Natl. Fisheries Inst., 1614-20th St., N. W., Washington 9, D. C.).
Oct. 25-31: Natl. Honey Week (Amer. Honey Inst., 114 N. Carroll St., Madison 3, Wis.).
Oct. 31: Hallowe'en.
Nov. 1-7: International Cat. Week.
Nov. 2-8: Natl. Horseradish Week.
Nov. 3: General Election Week.
Nov. 11: Veterans Day.
Nov. 13-21: Save-A-Wife Week.
Nov. 14: Sadie Hawkins Day.
Nov. 15-21: Diabetes Week.
Nov. 26: Thanksgiving Day.
Dec. 1-31: Give and Serve Meat for Christmas Month.
Dec. 7-11: Ice Cream for the Holidays Week.
Dec. 25: Christmas Day.
Jan. 1: New Year's Day.
Jan. 31-Feb. 6: Natl. Youth Week.

I.F.T. Sections Calendar of Meeting Dates

Western

So. Calif.: Sept. 16, joint meeting with AACC.
So. Calif.: Oct. 23, all day meeting, Miramar Hotel, Santa Monica, Calif.
So. Calif.: Nov. 18, Food Man of the Year.
So. Calif.: Dec. 2, Ladies' Night.

Midwest

Chicago: Sept. 26, a tour of the Dept. of Dairy and Food Industries, University of Wis., Madison; attendance at Wisconsin-Stanford football game is being arranged.

Southern

Mexico: **First Tuesday of each month. For time and place phone Walter E. McAllister, Mexico City 11-90-00.**

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THE EDITOR'S PAGE

President Should Act To Save Top-grade Farmland

Is the United States wantonly squandering and destroying its rich heritage of farmland, at the very time that our rapidly-increasing population makes this asset of top value and essentiality?

If so, what should be done about it?

These are two questions of the utmost importance to all American citizens, and especially to those of us who are concerned with the production, processing and marketing of food products.

The right answers can help tremendously in maintaining our nation's strength and well-being. The wrong ones can lead to disaster.

What Are the Facts?

Fact No. 1 is that the U.S. population is growing at a rapid rate. It was 123 millions in 1930, grew to 132 millions in 1940, to 151 millions in 1950, and will be close to 180 millions in 1960.

Fact No. 2 is that an increasing part of the population is found in towns and cities, rather than on the farms. In 1930, U.S. Bureau of the Census reports 56% of all Americans lived in towns of 2,500 and up. This increased to 57% in 1940 and to 59% in 1950. And, in 1950, 64% of the people lived in some sort of urban area.

Fact No. 3 is that this city growth is occurring in the suburbs rather than in the already-loaded metropolitan centers. Prof. Coleman Woodbury of University of Wisconsin, writing in SCIENCE for June 12, 1959, reports that during the period 1950-56, the population growth of central cities was 4.7%, that of the suburbs was 17.0%, and that of the suburban fringe areas was 55.8%. Out of the total population increase, central cities accounted for 15.6%, suburbs for 27.2% and fringe areas for 41.5%.

What about Acreage?

Over-all figures on U.S. farms do not suggest that these population developments are affecting cropland. In 1930, 379 million acres were used for crops, and in 1954 the total was 380 millions. During that same period, idle cropland dropped from 34 million to 19 million acres, but grassland pasture went up from 379 million to 526 million acres. (Data from U.S. Bureau of the Census).

However, when individual fruits and vegetables are examined, the acreage situation changes sharply. In a quarter-century, the acreage devoted to dry beans, potatoes, sweet potatoes and 23 principal fruits and nuts in the United States has dropped from 11,155,000 acres to 6,057,000, a decline of 46%, according to U.S. Dept. of Agriculture.

And an important part of the land which once produced these crops is now lost to production, having been taken over for housing developments, factories, airports, etc. The loss looks even greater when we remember that the large blocks of new land made fruitful by irrigation and reclamation projects.

Nobody, I am sure, wishes to suggest that Americans be forbidden to enjoy suburban living—or, in fact, that our freedom of choice be further restricted in any way beyond the red tape and government regulation with which we now have to struggle.

What's To Be Done?

Yet we cannot stand idly by while the richest fruit and vegetable acreage in our country is buried beneath an avalanche of concrete streets and foundations. We have compensated for the withdrawals to date by increasing the yield per acre, but this cannot go on forever.

It is essential, therefore, that this problem be given immediate study, and that a workable solution be evolved, before irreparable damage is done to America's food supply.

Who Is To Do It?

This journal, therefore, strongly urges that President Eisenhower forthwith name a small committee of the nation's most capable citizens—none of them concerned with government today—to make a thorough, impartial and non-political examination of the question, and to recommend a suitable answer to it.

Such a committee should first seek to set up standards of soil fertility—an index to the importance of any given piece of acreage in our agricultural productivity. Taken into account would be the richness of the land, and also such other factors as water availability, type of climate, transportation facilities.

It should then make a report as to how much land we have available in the several levels of productivity—and how much is currently being withdrawn for non-farm uses.

Applying the Facts

Next, the committee should develop a simple plan for determining what percentage of the total arable land of the country is of such a quality as to be essential to our national welfare, and for preventing this top-quality land from being used for other than agricultural purposes.

Finally, the committee should propose a method for protecting citizens who might be caught in an economic bind by such regulations—the grower, for example, who can't sell his farm for a housing development, but can't produce a profitable crop on it.

While this is socialism of a sort, and would impose further government regulation, the absolute necessity for conserving our top-grade cropland makes such a step of paramount importance to our national welfare.

El Stark
Editor

Remarkable dispenser assures pin-point accuracy!

New Flocron eliminates costly ingredient loss!

Canners, packers and food processors now using the new Flocron liquid dispenser report ingredient savings up to $1,000 per line. These savings are possible because the Flocron avoids waste inherent in "overflow fill" systems, stops "splash loss" and handles costly ingredients with money-saving speed and accuracy.

The remarkable Flocron is actually a precise electronic system with photoelectric circuits in a sealed unit and a new lever-type photo switch to activate dispensing. It assures high speed accuracy—even on lines handling up to 300 units per minute! Remote electronic controls permit you to "dial" the exact amount of liquid required for various can sizes: Brine . . . hot butter . . . Monosodium Glutamate . . . concentrated syrup . . . ascorbic acid . . . brine and sugar . . . spice oils . . . coloring . . . oil . . . chicken fat . . . flavors . . . medicinal liquids.

Designed for efficient, low cost operation. The Flocron is made of stainless steel and plastic and is constructed to avoid corrosion and lengthy breakdowns that result in costly downtime. There are no valves to stick or clog. The Flocron is easily cleaned by merely flushing the fluid system.

No need to revise production lines. The Flocron can be operated with existing equipment. Scientific Dispensing Company technicians are available in all areas to assist with installation and service problems.

The Flocron liquid dispenser is offered only by the Scientific Dispensing Division of the Morton Salt Company.

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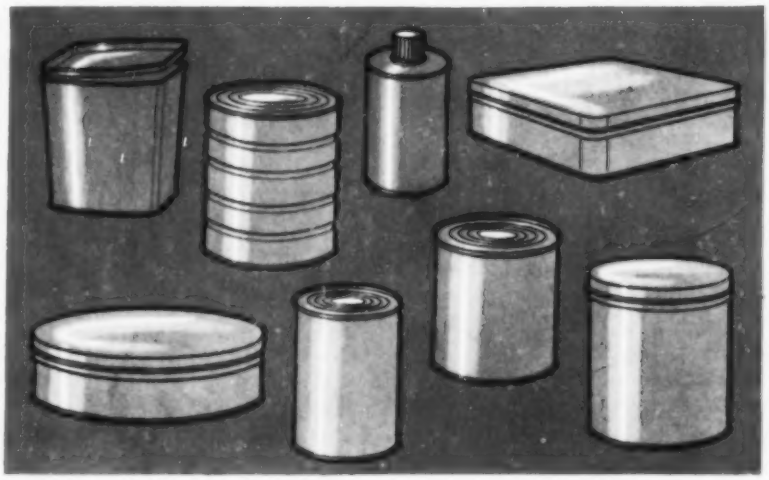

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